# **INVESTMENT PERFORMANCE ANALYSIS FOR PERIOD ENDING MARCH 31, 2021**



# NEW MEXICO EDUCATIONAL RETIREMENT BOARD

May 21, 2021
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# MARKET ENVIRONMENT UPDATE & OUTLOOK

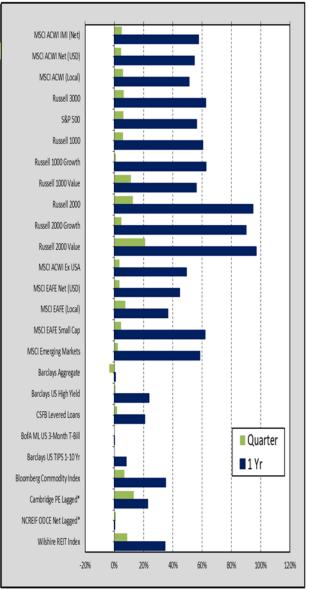
#### **ECONOMIC ENVIRONMENT**

- Q1 Real GDP (first estimate) grew at an annual rate of +6.4%.
  - Retail sales ended December at +9.9% on a YoY basis. In the same period last year the YoY growth rate was 4.7%.
  - Corporate profits as a percent of GDP ended Q3 at 10.0%, no change versus Q2, and remain elevated relative to historical levels.
  - The inventory-to-sales ratio ended February was 1.3. Levels have remained relatively constant since early 2010 with a spike to 1.7 in April 2020.
  - The U.S. trade deficit widened 1.9% (ended January).
- The unemployment rate was 6.0% in Q1, down from 6.7% in Q4; U-6, a broader measure of unemployment, decreased to 10.7% in Q1 from 11.7% in Q4.
  - The labor force participation rate ended Q1 at 61.5, no change versus Q4, after declining to 60.2% in April 2020 and is at levels below the 10 year pre-pandemic average of 63.2%.
- The Case-Shiller Home Price Index (ended January) increased to 236.3 from 232.4 (in November) and remains at levels higher than that of pre-financial crisis levels of 150.9.
- Rolling 12-month seasonally-adjusted CPI saw an uptick to 2.74% in Q1 from 1.29% in Q4;
   Capacity Utilization decreased to 74.4% in Q1 from 74.5% in Q4.
- Fed Funds rate remains at a targeted range of 0.00%-to-0.25%. The 10-year Treasury Yield (constant maturity) finished Q1 at 1.6% up from 0.9% in Q4.
- The Fed remains committed to continuing stimulative action as needed to support the US
  economy. The Fed's balance sheet continues to grow in the wake of the pandemic.
- S&P valuations increased in Q1 to 36.64 from 34.04 in Q1 and remains higher than the 10-year average of 26.86x.
  - Cyclically adjusted Shiller PE ratio remains above the long-term average of 16.81x



# MARKET ENVIRONMENT - Q1 2021 OVERVIEW

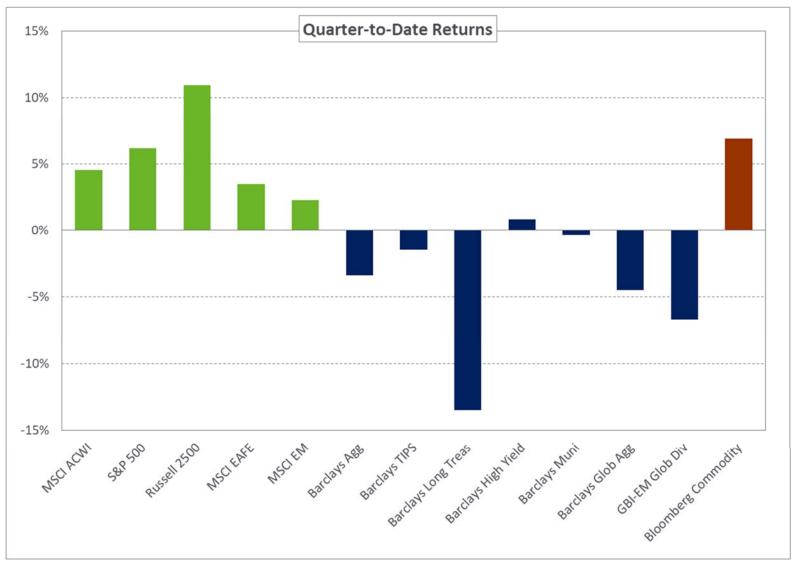
		Qtr.	<u>1 Yr.</u>	<u>3 Yr.</u>	<u>5 Yr.</u>	<u> 10 Yr.</u>
World Equity Benchmarks						
MSCI ACWI IMI (Net)	World with Small Cap	5.14%	57.58%	11.90%	13.21%	9.15%
MSCI ACWI Net (USD)	World W/O Small Cap	4.57%	54.60%	12.07%	13.21%	9.14%
MSCI ACWI (Local)	World (Local Currency)	5.85%	51.06%	12.61%	13.19%	10.30%
Domestic Equity Benchmarks						
Russell 3000	Domestic All Cap	6.35%	62.53%	17.12%	16.64%	13.79%
S&P 500	Large Core	6.17%	56.35%	16.78%	16.29%	13.91%
Russell 1000	Large Core	5.91%	60.59%	17.31%	16.66%	13.97%
Russell 1000 Growth	Large Growth	0.94%	62.74%	22.80%	21.05%	16.63%
Russell 1000 Value	Large Value	11.25%	56.09%	10.96%	11.74%	10.99%
Russell 2000	Small Core	12.70%	94.85%	14.76%	16.35%	11.68%
Russell 2000 Growth	Small Growth	4.88%	90.20%	17.16%	18.61%	13.02%
Russell 2000 Value	Small Value	21.17%	97.05%	11.57%	13.56%	10.06%
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	3.49%	49.41%	6.51%	9.76%	4.93%
MSCI EAFE Net (USD)	Int'l Developed	3.48%	44.57%	6.02%	8.85%	5.52%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	7.59%	36.56%	7.07%	8.82%	7.50%
MSCI EAFE Small Cap	Small Cap Int'l	4.50%	61.98%	6.32%	10.50%	8.01%
MSCI Emerging Markets	Emerging Equity	2.29%	58.39%	6.48%	12.07%	3.65%
Domestic Fixed Income Benchmarks						
Barclays Aggregate	Core Bonds	-3.37%	0.71%	4.65%	3.10%	3.44%
Barclays US High Yield	High Yield	0.85%	23.72%	6.84%	8.06%	6.48%
CSFB Levered Loans	Bank Loans	2.01%	20.77%	4.13%	5.33%	4.41%
BofAML US 3-Month T-Bill	Cash	0.03%	0.12%	1.49%	1.19%	0.63%
Barclays US TIPS 1-10 Yr	Inflation	0.06%	8.12%	5.09%	3.41%	2.64%
Alternative Benchmarks						
Bloomberg Commodity Index	Commodities	6.92%	35.04%	-0.20%	2.31%	-6.28%
Cambridge PE Lagged*	Private Equity	13.19%	22.92%	15.68%	15.54%	14.02%
NCREIF ODCE Net Lagged*	Real Estate	1.09%	0.34%	3.99%	5.27%	8.87%
Wilshire REIT Index	REIT	8.81%	34.75%	9.04%	4.96%	8.48%





\* As of 12/31/2020

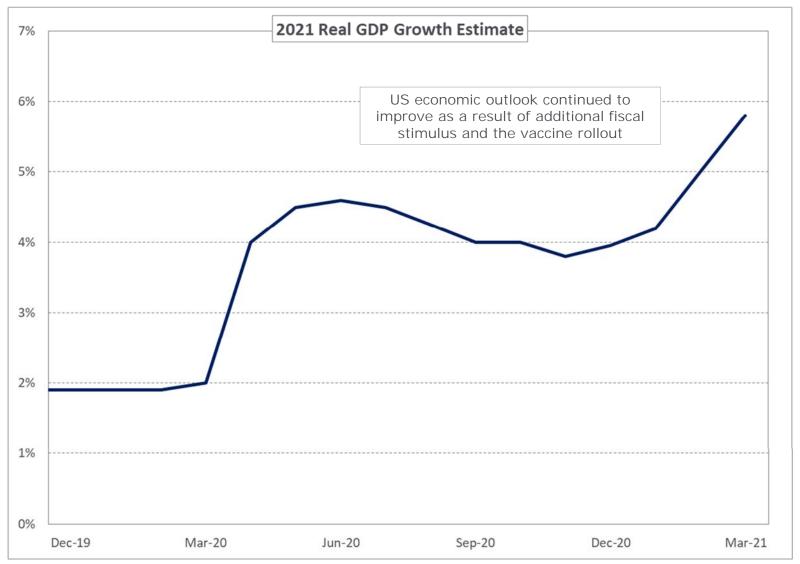
#### FIXED INCOME UNDERPERFORMED







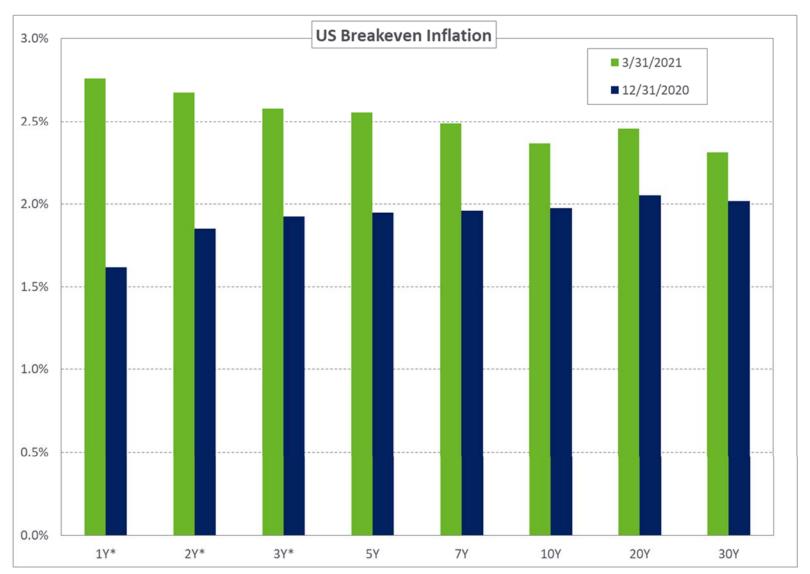
### THE U.S. ECONOMIC OUTLOOK IMPROVED







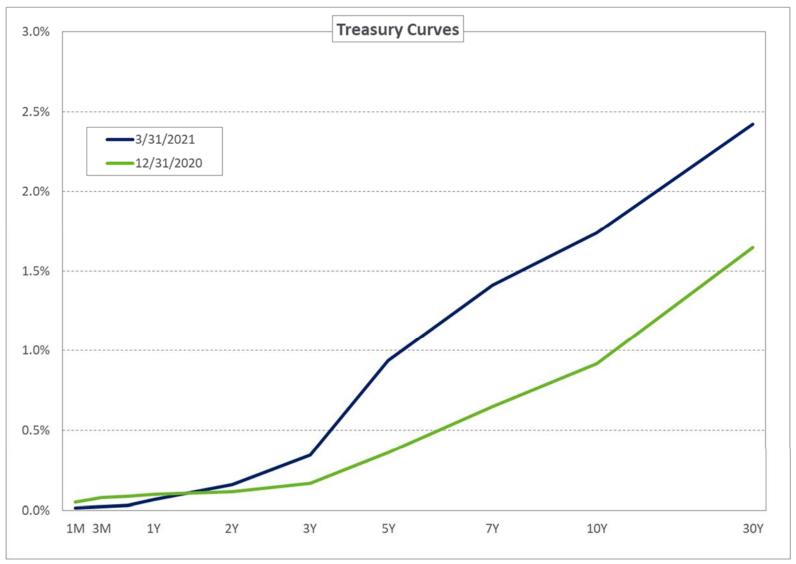
### NEAR-TERM INFLATION EXPECTATIONS ROSE







### LONG-TERM INTEREST RATES ROSE







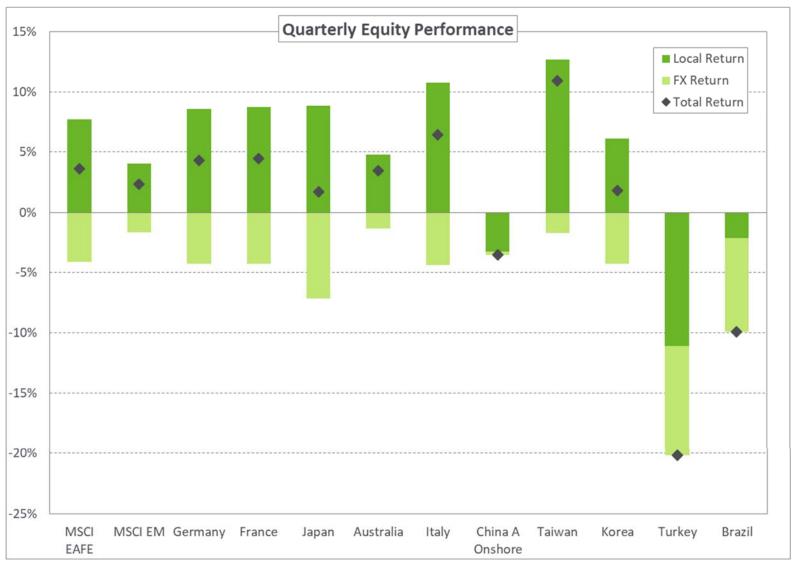
### THE U.S. YIELD CURVE STEEPENED





Source: FactSet Long-Term Median calculated as of 6/1/1976

### USD STRENGTH WEIGHED ON NON-US EQUITIES







### ASSESSING THE KEY MARKET THEMES

AS OF 03/31/21

	Dormant	Faded	Neutral	Prevalent	Dominant
Virus Trajectory No Change in Status	<ul> <li>Market sentiment outside the US reg</li> </ul>	in the US has improved arding distribution, logis	ntial force driving global e with a significant increas stics, and access to vaccir virus strains may impact	e in vaccinations, but cones	
	Dormant	Faded	Neutral	Prevalent	Dominant
Permanent Interventions No Change in Status	<ul><li>Additional fiscal sti</li><li>Central banks have</li></ul>	mulus in the US remain pledged to hold interes	force driving global mark s an option with discussion st rates near zero, while on the deve	on of a new infrastructu quantitative easing prog	
	Dormant	Faded	Neutral	Prevalent	Dominant
Globalization Backlash No Change in Status	The world will likel	•	e in coming years as the l lified wealth divide given political outcomes		
	Dormant	Faded	Neutral	Prevalent	Dominant
China Transitions No Change in Status	economic policy re • However, Presider	strictions	ministration has yet to sh policy review in 2021 reg nd trade issues		



#### THIRD PARTY PLACEMENT AGENT DISCLOSURE

The New Mexico Educational Retirement Board Policy Regarding Placement Agent Disclosures requires that quarterly performance reports to the Board include information regarding any third-party marketers that were used by recipients of investments including any fee, commission or retainer paid by the hired fund to the third-party marketer for services rendered. These fees are not paid by NMERB but are paid by the hired funds for marketing services to the third-party.

The following investments were approved by the NMERB Investment Committee during the quarter, with disclosures made under the policy:

#### Prism Capital I

The investment was approved for a \$40 million commitment on January 21, 2021 as part of the Fund's allocation to Private Equity.

Prism has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, Prism has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.

#### AE Industrial Partners Extended Value Fund

The investment was approved for a \$70 million commitment (\$40 million in new capital and \$30 million rolled from the previous fund) on February 18, 2021 as part of the Fund's allocation to Private Equity.

AE Industrial Partners has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, AE Industrial Partners has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.

#### B Capital Opportunities Fund I

The investment was approved for a \$10 million commitment on February 18, 2021 as part of the Fund's allocation to Private Equity.

B Capital has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, B Capital has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.

#### SV Health Growth VII

The investment was approved for a \$15 million commitment on February 18, 2021 as part of the Fund's allocation to Private Equity.

SV has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, SV has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.



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The following investments were approved by the NMERB Investment Committee during the quarter, with disclosures made under the policy:

#### Tenex Capital Partners Fund III

The investment was approved for a \$10 million commitment on February 18, 2021 as part of the Fund's allocation to Private Equity.

Tenex has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, Tenex has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.

#### BlackRock Tactical Ops Sandia Series

The investment was approved for a \$60 million commitment on March 18, 2021 as part of the Fund's allocation to Private Equity.

BlackRock has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, Blackrock has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.

#### Edison Fund X

The investment was approved for a \$60 million commitment on March 18, 2021 as part of the Fund's allocation to Private Equity.

Edison has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, Edison has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.

#### Harvest Fund Advisors

The contract extension was approved on March 18, 2021 as part of the Fund's allocation to Real Assets.

Harvest has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, Harvest has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.



#### THIRD PARTY PLACEMENT AGENT DISCLOSURE

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The following investments were approved by the NMERB Investment Committee during the guarter, with disclosures made under the policy:

#### Kildare European Partners III

The investment was approved for a \$50 million commitment on March 18, 2021 as part of the Fund's allocation to Real Estate.

Kildare has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, Kildare has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.

#### Lightvear Fund V

The investment was approved for a \$10 million commitment on March 18, 2021 as part of the Fund's allocation to Private Equity.

Lightyear has provided documentation confirming no placement agent was used in connection with NMERB's investment.

Additionally, Lightyear has completed the ERB Campaign Contribution Disclosure and reports no applicable campaign contributions.



## **TOTAL FUND PERFORMANCE SUMMARY (NET)**

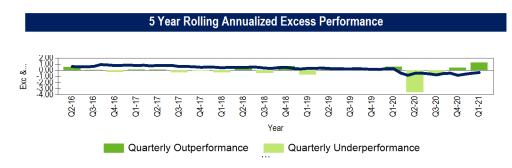
	Market Value	3 Mo	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	15 Yrs	Rank	20 Yrs	Rank	4/1/91 - 3/31/21	Rank	Inception	Inception Date
Total Fund	\$14,732,541,618	4.73%	10	18.82%	65	23.21%	99	8.56%	64	9.42%	69	7.85%	52	6.69%	44	6.75%	51	8.78%	4	9.07%	Jul-83
Policy Index		3.46%	49	17.52%	86	26.10%	89	9.06%	47	9.79%	48	7.79%	53	6.42%	58	6.67%	55	7.69%	76		Jul-83
60% MSCI ACWI (Net) / 40% FTSE WGBI		0.40%	99	17.07%	91	31.31%	57	8.39%	69	8.95%	84	6.34%	94	5.95%	80	6.37%	71	7.11%	95		Jul-83
S&P 500		6.17%	1	29.71%	1	56.35%	1	16.78%	1	16.29%	1	13.91%	1	10.02%	1	8.47%	1	10.42%	1	11.38%	Jul-83
BBgBarc US Aggregate TR		-3.37%	99	-2.12%	99	0.71%	99	4.65%	99	3.10%	99	3.44%	99	4.29%	99	4.50%	99	5.65%	98	6.89%	Jul-83
InvMetrics Public DB > \$1B Net Median		3.38%		19.78%		31.74%		8.93%		9.73%		7.87%		6.60%		6.75%		8.04%		9.06%	Jul-83

Over the past five years, the Fund returned 9.4% per annum, underperforming the policy index by 37 basis points and ranking in the  $69^{th}$  percentile of the Investment Metrics Public Funds > \$1 Billion universe and outperforming the actuarial assumed rate of 7.00%. The Fund's volatility was 5.7%, which ranks in the  $2^{nd}$  percentile of its peers over this period. The Fund's risk-adjusted performance, as measured by the Sharpe Ratio, ranks in the  $3^{rd}$  percentile of its peers.

Over the past three years, the Fund returned 8.6% per annum, underperforming the policy index by 50 basis points and ranking in the  $64^{\rm th}$  percentile of its peer group. Over the same period, the Fund's volatility ranks in the  $3^{\rm rd}$  percentile of its peers, resulting in a three-year Sharpe Ratio of 1.0, which ranks in the  $4^{\rm th}$  percentile.

For the year ending March 31, 2021, the Fund experienced a net investment gain of \$2.8 billion, which includes a net investment gain of \$672.3 million during the quarter. Assets increased from \$12.4 billion twelve months ago, to \$14.7 billion on March 31, 2021, with \$496.9 million in net distributions during the year. The Fund returned 23.2%, underperforming the policy index by 289 basis points and ranking in the 99th percentile of its peers.

The InvMetrics Public Funds >\$1 Billion Net Universe contains 83 observations for the period ending March 31, 2021, with total assets of \$656 billion. Policy Index return for quarter ended 3/31/2021 includes return of Private Equity Composite. ILPA PM Benchmark return unavailable at time of report creation.



		5 Year	rs Ending Mai	rch 31, 20	21			
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio	Rank
Total Fund	9.4%	69	5.7%	2	1.4	3	1.5	10
Policy Index	9.8%	48	6.2%	6	1.4	5	1.4	16
InvMetrics Public DB > \$1B Net Median	9.7%		8.6%		1.0		1.1	

		3 Yea	rs Ending Ma	rch 31, 20	21			
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio	Rank
Total Fund	8.6%	64	7.0%	3	1.0	4	1.2	18
Policy Index	9.1%	47	7.7%	6	1.0	5	1.2	15
InvMetrics Public DB > \$1B Net Median	8.9%		10.6%		0.7		0.9	



#### **POLICY INDEX HISTORY**

- 4/1/2012 6/30/2012: 23% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 18% Barclays Aggregate, 15% Bank of America Merrill Lynch US High BB-B Constrained Index, 2% JP Morgan GBI EM Global Diversified Index, 5% (60% MSCI World HH / 40% CITI WGBI HH), 8% (90 Day T-Bill + 2%), 3% Wilshire REIT, 2% NCREIF Property Index, 5% Cambridge Associates US All PE 1 Quarter Lag, 1% (CPI + 4% Seasonally Adjusted), 1% 90 Day T-Bill.
- 7/1/2012 6/30/2013: 23% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 18% Barclays Aggregate Index, 15% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 5% (60% MSCI World HH / 40% CITI WGBI HH), 3% Wilshire REIT, 2% NCREIF Property Index, 8% (91 Day T-Bill + 2% 1 month lag), 5% Cambridge Associates All US PE 1 Quarter Lag, 1% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 7/1/2013 6/30/2014: 20% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 7% Barclays Aggregate Index, 20% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 5% (60% MSCI World HH / 40% CITI WGBI HH), 5% Credit Suisse Hedge Global Macro Index, 3% Wilshire REIT Index, 2% NCREIF Property Index, 3% (91 Day T-Bill + 2% 1 Month Lag), 8% Cambridge Associates US All PE 1 Quarter Lag, 7% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 7/1/2014 9/30/2014: 20% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 7% Barclays Aggregate Index, 20% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 5% (60% MSCI World / 40% CITI WGBI), 5% Credit Suisse Hedge Global Macro Index, 3% Wilshire REIT Index, 2% NCREIF Property Index, 3% (91 Day T-Bill + 2% 1 Month Lag), 8% Cambridge Associates US All PE 1 Quarter Lag, 7% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 10/1/2014 1/31/2016: 18% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 20% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 5% (60% MSCI World / 40% CITI WGBI), 5% Credit Suisse Hedge Global Macro Index, 4% Wilshire REIT Index, 3% NCREIF Property Index, 11% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.

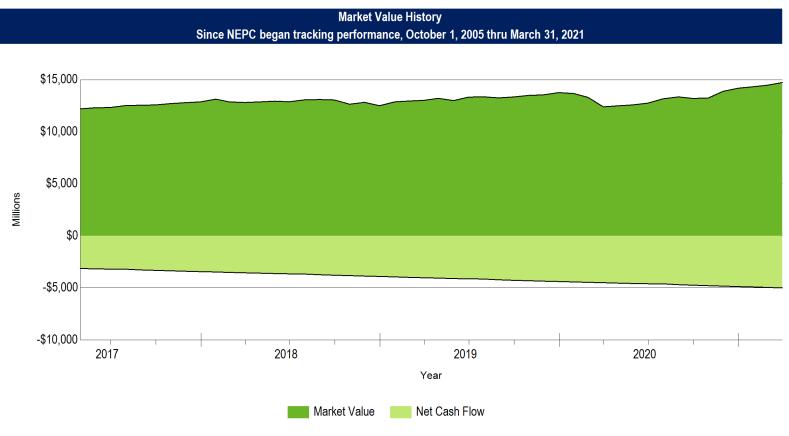


#### **POLICY INDEX HISTORY**

- 2/1/2016 12/31/2016: 18% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 20% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% (50% JP Morgan EMBI Global Diversified Index / 50% JP Morgan GBI EM Global Diversified Index), 5% (60% MSCI World / 40% CITI WGBI), 5% Credit Suisse Hedge Global Macro Index, 4% Wilshire REIT Index, 3% NCREIF Property Index, 11% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 1/1/2017 9/30/2017: 18% S&P 500 Index, 2% Russell 2500 Index, 5% MSCI EAFE Index, 10% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 20% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% (50% JP Morgan EMBI Global Diversified Index / 50% JP Morgan GBI EM Global Diversified Index), 5% (60% MSCI World / 40% CITI WGBI), 5% Credit Suisse Hedge Global Macro Index, 3% Wilshire REIT Index, 4% NCREIF Property Index, 11% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 10/1/2017 12/31/2017: 16% S&P 500 Index, 3% Russell 2500 Index, 5% MSCI EAFE Index, 9% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 18% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 7% (60% MSCI World / 40% CITI WGBI), 5% Libor + 2%, 3% Wilshire REIT Index, 4% NCREIF Property Index, 13% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 1/1/2018 6/30/2019: 16% S&P 500 Index, 3% Russell 2500 Index, 5% MSCI EAFE Index, 9% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 18% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 12% Libor + 2%, 3% Wilshire REIT Index, 4% NCREIF Property Index, 13% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- **7/1/2019 9/30/2020:** 16% S&P 500 Index, 3% Russell 2500 Index, 5% MSCI EAFE Index, 9% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 18% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 12% Libor + 2%, 2% Wilshire REIT Index, 5% NCREIF Property Index, 13% Cambridge Associates US All PE 1 Quarter Lag, 8% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.
- 10/1/2020 Present: 14% S&P 500 Index, 3% Russell 2500 Index, 5% MSCI EAFE Index, 9% MSCI Emerging Markets Index, 6% Barclays Aggregate Index, 16% (50% Credit Suisse Leveraged Loan Index / 50% Bank of America Merrill Lynch US HY BB-B Rated Constrained Index), 2% JP Morgan GBI EM Global Diversified Index, 12% Libor + 2%, 2% Wilshire REIT Index, 6% NCREIF Property Index, 15% Cambridge Associates US All PE 1 Quarter Lag, 9% (CPI + 4% Seasonally Adjusted), 1% 91 Day T-Bill.



#### **TOTAL FUND ASSET GROWTH SUMMARY**



	Last Three Months	Fiscal Year-To-Date	One Year	Three Years	Five Years	Since 10/1/05
Beginning Market Value	\$14,185,864,078	\$12,752,951,878	\$12,397,680,472	\$12,812,114,116	\$11,145,741,106	\$7,694,652,364
Net Cash Flow	-\$125,608,843	-\$396,966,263	-\$496,906,584	-\$1,447,816,928	-\$2,265,374,104	-\$4,978,382,122
Net Investment Change	\$672,286,383	\$2,376,556,003	\$2,831,767,731	\$3,368,244,430	\$5,852,174,616	\$12,016,271,377
Ending Market Value	\$14,732,541,618	\$14,732,541,618	\$14,732,541,618	\$14,732,541,618	\$14,732,541,618	\$14,732,541,618

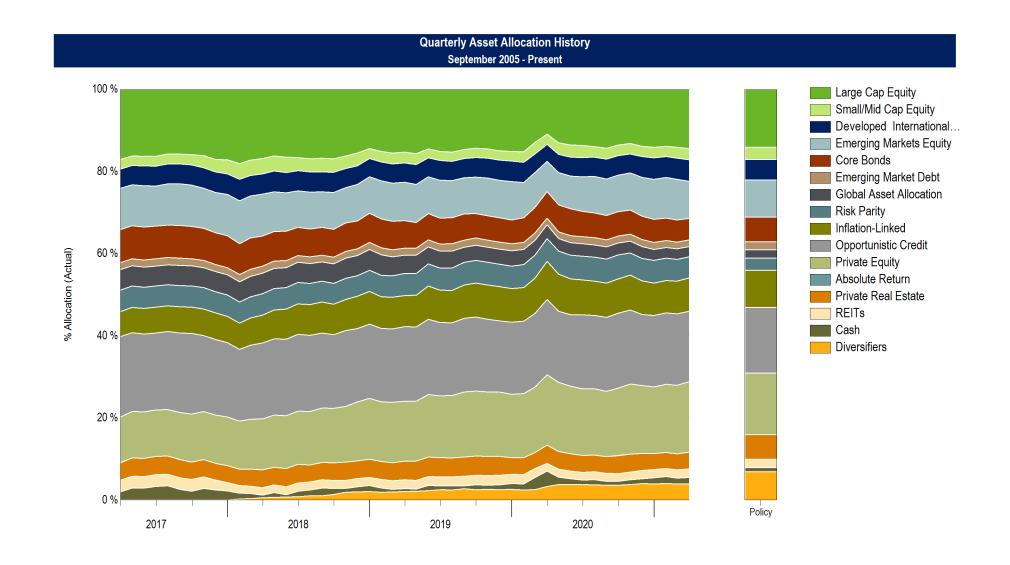


## TOTAL FUND ASSET ALLOCATION VS. POLICY

Current Allocation	<u>Policy</u> <u>Target</u>		Current Mkt Value	Current Allocation	Policy Target <sup>1</sup>	Policy Range	Within Range	Difference
		Equity	\$4,630,556,417	31.4%	31.0%	15% - 55%	Yes	0.4%
4.4.40/	14.0%	U.S. Equity	\$2,528,503,294	17.2%	17.0%	8% - 30%	Yes	0.2%
14.4%	14.0%	U.S. Large Cap Equity	\$2,126,539,909	14.4%	14.0%	7% - 25%	Yes	0.4%
		U.S. Small/Mid Cap Equity	\$401,963,385	2.7%	3.0%	0% - 5%	Yes	-0.3%
0. 201	3.00/	Non-U.S. Equity	\$2,102,053,123	14.3%	14.0%	5% - 25%	Yes	0.3%
2.7%	3.0%	Non-U.S. Developed Mkts	\$766,840,926	5.2%	5.0%	0% - 10%	Yes	0.2%
5.2%	5.0%	Non-U.S. Emerging Mkts	\$1,335,212,196	9.1%	9.0%	2% - 15%	Yes	0.1%
		Fixed Income	\$3,533,651,095	24.0%	24.0%	10% - 58%	Yes	0.0%
9.1%	9.0%	Core Fixed Income	\$763,680,195	5.2%	6.0%	0% - 20%	Yes	-0.8%
		Opportunistic Credit	\$2,527,824,657	17.2%	16.0%	0% - 30%	Yes	1.2%
5.2%	6.0%	Emerging Mkts Debt	\$242,146,243	1.6%	2.0%	0% - 8%	Yes	-0.4%
3.27	0.070	Alternatives	\$6,346,022,969	43.1%	44.0%	10% - 65%	Yes	-0.9%
		Absolute Return	\$337,483	0.0%	0.0%	0% - 10%	Yes	0.0%
17.2%	16.0%	Diversifying Assets	\$1,717,599,706	11.7%	12.0%			-0.3%
		Global Asset Allocation	\$370, 139, 434	2.5%	2.0%	0% - 6%	Yes	0.5%
		Risk Parity	\$763,287,687	5.2%	3.0%	0% - 6%	Yes	2.2%
<del>0.6%</del>	<del>8.0%</del>	Other Diversifying Assets	\$584,172,585	4.0%	7.0%	0% - 12%	Yes	-3.0%
0.070		Real Estate	\$910,010,102	6.2%	8.0%	0% - 15%	Yes	-1.8%
11.7%	12.0%	REITs	\$314,805,484	2.1%	2.0%	270 1270		0.1%
11.770	12.070	Private Real Estate	\$595,204,617	4.0%	6.0%			-2.0%
6.2%	8.0%	Private Equity	\$2,527,716,068	17.2%	15.0%	0% - 24%	Yes	2.2%
	3.070	Inflation-Linked Assets	\$1,190,359,611	8.1%	9.0%	0% - 16%	Yes	-0.9%
47.20/		Cash	\$222,305,483	1.5%	1.0%	-20% - 15%	Yes	0.5%
17.2%	15.0%	Total	\$14,732,541,618	100.0%	100.0%			0.0%
		<sup>1</sup> Long-Term Policy Target approved	by the Board in A	ugust 2010				
8.1%	9.0%	Note: Allocations shown here include	3	Ü				
1.5%	1.0%	Totals may not add to 100% due to	,		3 ,	ortfolio totaling ¢	5 655	
<del>/0</del>	<del></del>	rotals may not add to 10070 dde to		iai i ii iciaacs	Logacy Assers po	with the stand of the	5,000.	

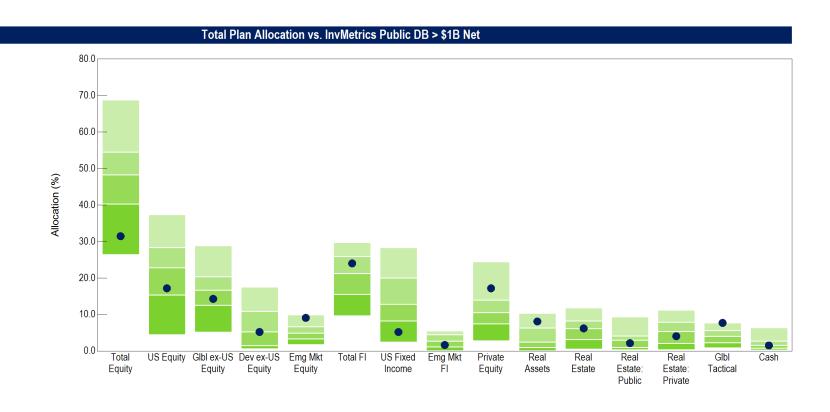


### **TOTAL FUND ASSET ALLOCATION HISTORY**





#### TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE



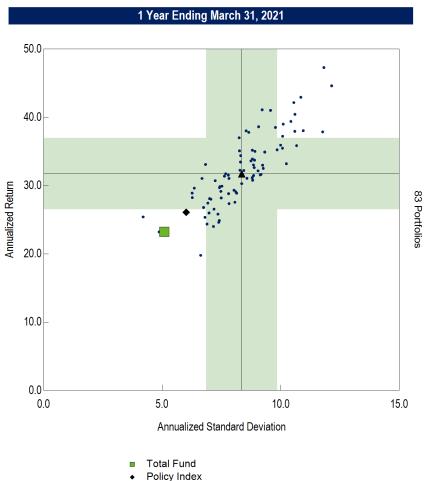
5th Percentile 25th Percentile Median 75th Percentile 95th Percentile # of Portfolios

■ Total Fund

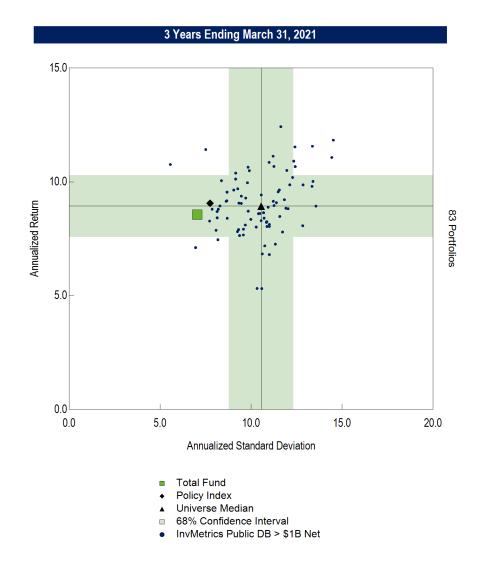
Allocat	tion (Rank)														
68.8	37.3	28.9	17.5	9.9	29.7	28.3	5.5	24.5	10.3	11.8	9.3	11.2	7.7	6.4	
54.5	28.4	20.4	10.9	6.7	25.9	20.1	4.5	14.0	6.4	8.3	4.2	8.0	5.6	2.8	
48.3	22.9	16.7	5.3	5.0	21.3	12.9	2.8	10.6	2.5	6.2	3.0	5.4	4.1	1.7	
40.3	15.4	12.6	1.6	3.4	15.6	8.3	1.2	7.5	1.0	3.2	1.0	2.2	2.3	0.9	
26.4	4.5	5.3	0.7	1.8	9.7	2.5	0.2	2.9	0.1	0.6	0.4	0.4	0.9	0.3	
60	43	56	29	42	60	41	26	53	32	54	20	47	8	60	
31.4	(85) 17.2 (	(71) 14.3 (61)	5.2 (54)	9.1	(8) 24.0 (42)	5.2 (87)	1.6 (69	) 17.2 (12)	8.1	(9) 6.2 (53)	2.1 (58)	4.0 (65)	7.7 (6)	1.5 (60)	



# TOTAL FUND RISK/RETURN



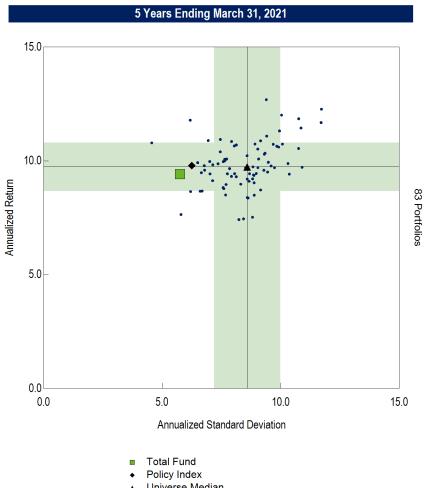
- Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net



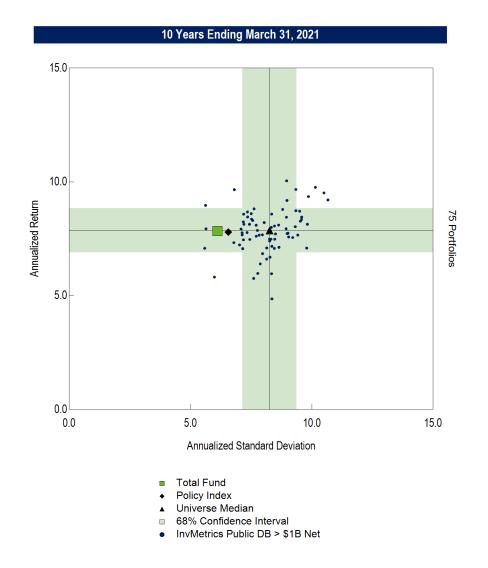
Note: Ranks are based on net returns.



# TOTAL FUND RISK/RETURN



- Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net



Note: Ranks are based on net returns.



Total Fund vs. InvMetrics Public DB > \$1B Net (USD) (peer)
1 Year





Total Fund vs. InvMetrics Public DB > \$1B Net (USD) (peer) 3 Year



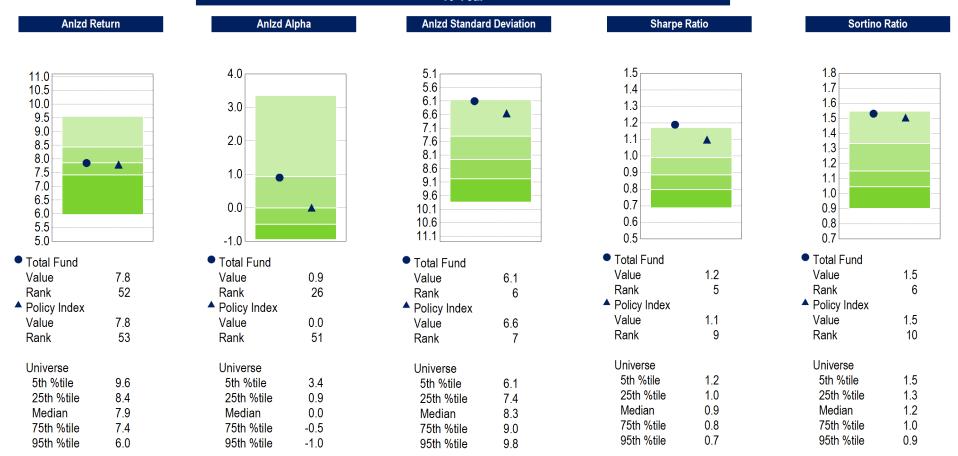


Total Fund vs. InvMetrics Public DB > \$1B Net (USD) (peer) 5 Year





Total Fund vs. InvMetrics Public DB > \$1B Net (USD) (peer) 10 Year





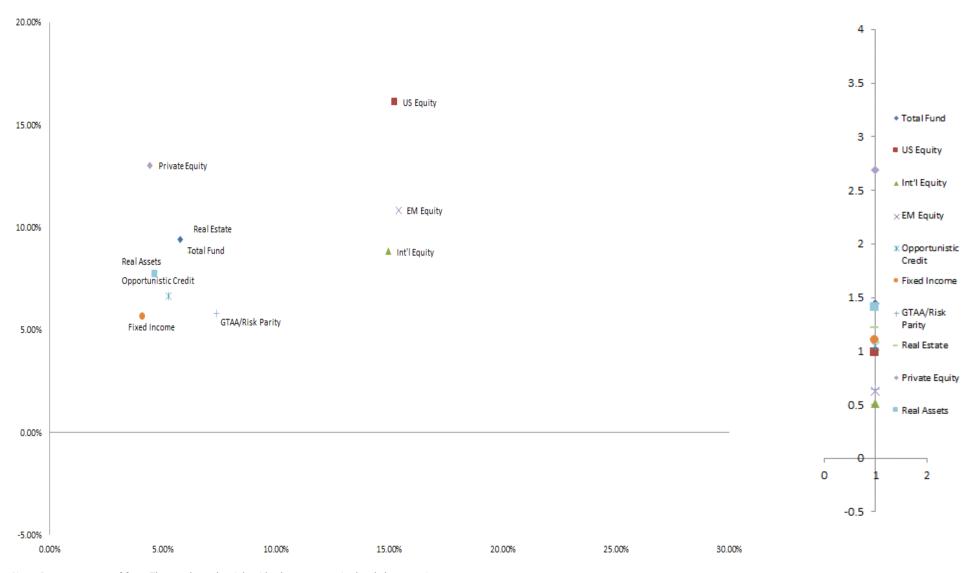
# 3 YEAR RISK/RETURN PROFILE



Note: Returns are net of fees. The graph on the right side shows composite level sharpe ratios.



# **5 YEAR RISK/RETURN PROFILE**

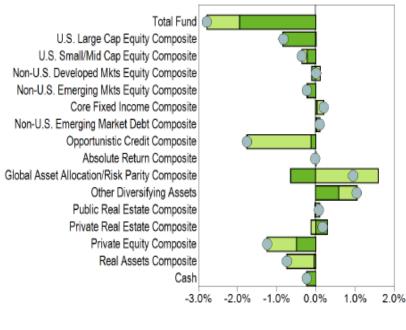


Note: Returns are net of fees. The graph on the right side shows composite level sharpe ratios.



#### TOTAL FUND ATTRIBUTION ANALYSIS

# Attribution Effects 1 Year Ending March 31, 2021



Allocation Effect
Selection Effect
Total Effect

- 1 Year Excess Return: -2.79%
  - Allocation Effect: -1.96%
    - Other Diversifying Assets underweight (+0.58%)
    - Private Real Estate underweight (+0.30%)
    - Non-U.S. Emerging Markets Equity underweight (-0.20%)
    - U.S. Small/Mid Cap Equity underweight (-0.22%)
    - Cash overweight (-0.23%)
    - Private Equity overweight (-0.50%)
    - Global Asset Allocation/Risk Parity overweight (-0.64%)
    - U.S. Large Cap Equity underweight (-0.83%)
  - Manager Selection Effect: -0.83%
    - Global Asset Allocation/Risk Parity outperformed (+1.58%)
    - Other Diversifying Assets outperformed (+0.46%)
    - Core Fixed Income outperformed (+0.17%)
    - Real Assets underperformed (-0.68%)
    - Private Equity underperformed (-0.74%)
    - Opportunistic Credit underperformed (-1.64%)
  - Residual: 0.00%

The Brinson-Fachler Attribution model explains excess return by identifying the size of contributors or detractors from excess return based on the three effects defined below:

Allocation Effect: Measures the impact of the decision to over/under weight asset classes relative to Interim SAAP benchmark weights. (Return Asset Class Index – Total Interim Policy Index Return) × (Weight Asset Class Portfolio – Weight Asset Class Interim Policy Index).

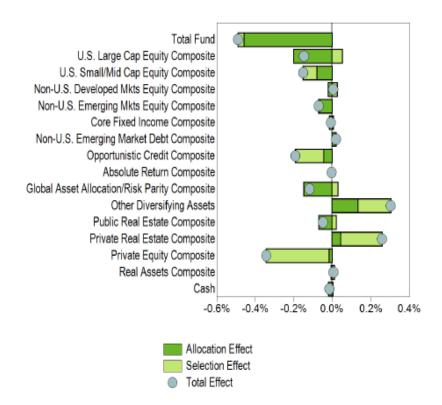
Manager Selection Effect: Measures the impact of over/under performance of asset classes in the portfolio relative to the asset class benchmarks in the Interim SAAP benchmark. [Weight Asset Class Benchmark × (Return Portfolio Asset Class – Return Asset Class in Interim Policy Index)] + Interaction Effect: Measures the impact of over/under weighting decisions and over/under performance. (Return Asset Class Portfolio (Weight Asset Class Portfolio – Weight Asset Class Policy Index))—(Return Asset Class Index (Weight Asset Class Portfolio – Weight Asset Cl

Residual: Contribution to excess return not captured in Allocation Effect and Manager Selection Effect.



#### TOTAL FUND ATTRIBUTION ANALYSIS

# Attribution Effects 3 Years Ending March 31, 2021



#### 3 Year Excess Return: -0.53%

- Allocation Effect: -0.52%
  - Other Diversifying Assets underweight (+0.12%)
  - U.S. Small/Mid Cap Equity underweight (-0.07%)
  - Public Real Estate overweight (-0.07%)
  - Non U.S. Emerging Markets Equity overweight (-0.07%)
  - Global Asset Allocation/Risk Parity overweight (-0.16%)5
  - U.S. Large Cap Equity underweight (-0.23%)
- Manager Selection Effect: -0.02%
  - Private Real Estate outperformed (+0.21%)
  - Other Diversifying Assets outperformed (+0.17%)
  - U.S. Large Cap Equity outperformed (+0.06%)
  - U.S. Small/Mid Cap Equity underperformed (-0.07%)
  - Opportunistic Credit underperformed (-0.14%)
  - Private Equity underperformed (-0.32%)
- Residual: 0.00%

The Brinson-Fachler Attribution model explains excess return by identifying the size of contributors or detractors from excess return based on the three effects defined below:

Allocation Effect: Measures the impact of the decision to over/under weight asset classes relative to Interim SAAP benchmark weights. (Return Asset Class Index – Total Interim Policy Index Return) × (Weight Asset Class Portfolio – Weight Asset Class Interim Policy Index).

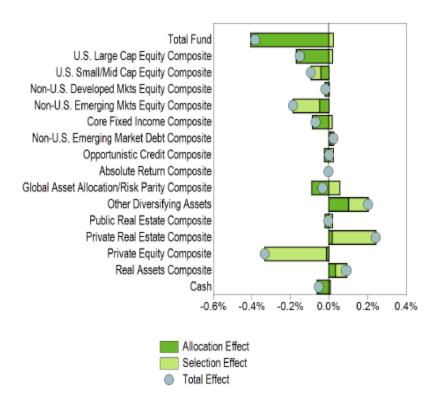
Manager Selection Effect: Measures the impact of over/under performance of asset classes in the portfolio relative to the asset class benchmarks in the Interim SAAP benchmark. [Weight Asset Class Benchmark × (Return Portfolio Asset Class – Return Asset Class in Interim Policy Index)] + Interaction Effect: Measures the impact of over/under weighting decisions and over/under performance. (Return Asset Class Portfolio (Weight Asset Class Portfolio – Weight Asset Class Policy Index))—(Return Asset Class Index (Weight Asset Class Portfolio – Weight Asset Class Portfolio – Weight Asset Class Portfolio – Weight Asset Class Index)).

Residual: Contribution to excess return not captured in Allocation Effect and Manager Selection Effect.



### TOTAL FUND ATTRIBUTION ANALYSIS

# Attribution Effects 5 Years Ending March 31, 2021



#### 5 Year Excess Return: -0.49%

- Allocation Effect: -0.39%
  - Other Diversifying Assets underweight (+0.10%)
  - Cash overweight (-0.06%)
  - Non-U.S. Emerging Mkts Equity underweight (-0.05%)
  - Global Asset Allocation/Risk Parity overweight (-0.09%)
  - Core Fixed Income overweight (-0.09%)
  - U.S. Large Cap Equity underweight (-0.17%)
- Manager Selection Effect: +0.02%
  - Private Real Estate outperformed (+0.22%)
  - Other Diversifying Assets outperformed (+0.10%)
  - Global Asset Allocation/Risk Parity outperformed (+0.06%)
  - Non U.S. Emerging Mkts Equity underperformed (-0.14%)
  - Private Equity underperformed (-0.32%)
- Residual: 0.00%

The Brinson-Fachler Attribution model explains excess return by identifying the size of contributors or detractors from excess return based on the three effects defined below:

Allocation Effect: Measures the impact of the decision to over/under weight asset classes relative to Interim SAAP benchmark weights. (Return Asset Class Index – Total Interim Policy Index Return) × (Weight Asset Class Portfolio – Weight Asset Class Interim Policy Index).

Manager Selection Effect: Measures the impact of over/under performance of asset classes in the portfolio relative to the asset class benchmarks in the Interim SAAP benchmark. [Weight Asset Class Benchmark × (Return Portfolio Asset Class – Return Asset Class in Interim Policy Index)] + Interaction Effect: Measures the impact of over/under weighting decisions and over/under performance. (Return Asset Class Portfolio (Weight Asset Class Portfolio – Weight Asset Class Policy Index))—(Return Asset Class Index (Weight Asset Class Portfolio – Weight Asset Class Portfolio – Weight Asset Class Portfolio – Weight Asset Class Index)).

Residual: Contribution to excess return not captured in Allocation Effect and Manager Selection Effect.



### **TOTAL FUND RISK STATISTICS**

				3 Yea	rs Ending Ma	arch 31, 2021						
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
U.S. Large Cap Equity Composite	14.4%	17.3%	13	18.1%	2	0.8%	9	0.6%	7	0.8	1	1.0
S&P 500	-	16.8%	26	18.4%	3	0.0%	17	0.0%	1	-		1.0
U.S. Small/Mid Cap Equity Composite	2.7%	12.7%	99	24.1%	99	-2.2%	70	3.7%	85	-0.7		1.0
NMERB Small/Mid Cap Equity Blended Index		15.3%	70	24.5%	99	0.0%	17	0.0%	1			1.0
Non-U.S. Developed Mkts Equity Composite	5.2%	6.5%	71	18.1%	57	0.4%	69	1.0%	13	0.4	69	1.0
MSCI EAFE	-	6.0%	79	17.7%	34	0.0%	77	0.0%	1			1.0
Non-U.S. Emerging Mkts Equity Composite	9.1%	6.5%	22	18.3%	6	0.3%	17	2.8%	28	0.0	23	0.9
MSCI Emerging Markets	-	6.5%	24	19.2%	54	0.0%	22	0.0%	1			1.0
Core Fixed Income Composite	5.2%	4.4%	77	4.3%	59	-0.6%	99	1.8%	47	-0.1		1.1
BBgBarc US Aggregate TR	-	4.7%	71	3.6%	13	0.0%	71	0.0%	1			1.0
Non-U.S. Emerging Market Debt Composite	1.6%	1.9%	43	11.6%	36	0.2%	18	2.8%	30	0.1	12	1.0
Non-U.S. EMD Custom Benchmark	-	1.7%	44	11.3%	32	0.0%	20	0.0%	1			1.0
Opportunistic Credit Composite	17.2%	4.9%		6.7%		2.3%		8.6%		-0.1		0.3
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index		5.4%		8.6%		0.0%		0.0%				1.0
Global Asset Allocation/Risk Parity Composite	7.7%	4.0%		9.0%		13.0%		9.0%		0.0		-4.5
GAA/Risk Parity Custom Index	-	3.7%		0.3%		0.0%	-	0.0%			-	1.0

		3 Years Er	nding March 31, 2021				
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank
Real Estate Composite	6.2%	9.6%	1	7.0%	99	8.6%	1
NCREIF Property Index	-	4.9%	45	2.5%	43	0.0%	78
Private Equity Composite	17.2%	13.0%	60	5.2%	1	10.2%	51
ILPA Private Markets Benchmark (1 Qtr Lag)	-	14.1%	50	11.8%	87	0.0%	86
Real Assets Composite	8.1%	6.8%	21	5.4%	29	-1.2%	78
CPI + 4% (Seasonally Adjusted)	-	6.1%	26	0.9%	1	0.0%	65

<sup>1 -</sup> Performance for Equity, Fixed Income, and Emerging Mkt Debt, Opportunistic Credit and GAA/Risk Parity composites are net of fees.

Note: Percent of Total equals 94.6% because Absolute Return Composite, Diversifying Assets Composite, and Cash Composite are not included.



### **TOTAL FUND RISK STATISTICS**

5 Years Ending March 31, 2021												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
U.S. Large Cap Equity Composite	14.4%	16.5%	28	14.7%	2	0.4%	12	0.5%	5	0.4	13	1.0
S&P 500	-	16.3%	49	14.9%	3	0.0%	18	0.0%	1	-		1.0
U.S. Small/Mid Cap Equity Composite	2.7%	14.0%	96	19.4%	99	-1.4%	69	3.7%	89	-0.5		1.0
NMERB Small/Mid Cap Equity Blended Index		15.9%	62	19.7%	99	0.0%	18	0.0%	1			1.0
Non-U.S. Developed Mkts Equity Composite	5.2%	8.8%	82	15.0%	45	-0.1%	82	1.0%	13	0.0	69	1.0
MSCI EAFE	-	8.8%	80	14.7%	32	0.0%	65	0.0%	1			1.0
Non-U.S. Emerging Mkts Equity Composite	9.1%	10.8%	45	15.4%	2	-0.4%	30	2.8%	24	-0.4		0.9
MSCI Emerging Markets	-	12.1%	24	16.4%	39	0.0%	18	0.0%	1	-		1.0
Core Fixed Income Composite	5.2%	3.3%	85	3.8%	62	0.0%	97	1.4%	44	0.1	85	1.1
BBgBarc US Aggregate TR	-	3.1%	93	3.3%	16	0.0%	97	0.0%	1	-		1.0
Non-U.S. Emerging Market Debt Composite	1.6%	4.8%	28	9.5%	40	0.8%	20	2.6%	54	0.3	14	0.9
Non-U.S. EMD Custom Benchmark	-	4.1%	54	9.7%	41	0.0%	41	0.0%	1	-		1.0
Opportunistic Credit Composite	17.2%	6.7%		5.2%		3.9%		6.7%		0.0		0.3
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index		6.4%	-	6.8%		0.0%		0.0%	-			1.0
Global Asset Allocation/Risk Parity Composite	7.7%	5.8%		7.4%		2.4%		7.4%		0.0		0.5
GAA/Risk Parity Custom Index	-	6.0%	-	2.6%	-	0.0%	-	0.0%	-	-		1.0

5 Years Ending March 31, 2021												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank					
Real Estate Composite	6.2%	8.8%	1	6.2%	97	7.0%	1					
NCREIF Property Index	-	5.8%	55	2.7%	45	0.0%	84					
Private Equity Composite	17.2%	13.0%	55	4.4%	1	11.1%	54					
ILPA Private Markets Benchmark (1 Qtr Lag)	-	14.0%	47	9.9%	88	0.0%	86					
Real Assets Composite	8.1%	7.7%	10	4.6%	18	0.6%	70					
CPI + 4% (Seasonally Adjusted)	-	6.3%	19	0.8%	1	0.0%	78					

<sup>1 -</sup> Performance for Equity, Fixed Income, and Emerging Mkt Debt, Opportunistic Credit and GAA/Risk Parity composites are net of fees.

Note: Percent of Total equals 94.6% because Absolute Return Composite, Diversifying Assets Composite, and Cash Composite are not included.



# PERFORMANCE DETAIL - TOTAL FUND & U.S. EQUITY

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Fund	14,732,541,618	100.0	4.7	10	18.8	65	23.2	99	8.6	64	9.4	69	7.8	52	9.1	Jul-83
Policy Index			<u>3.5</u>	49	<u>17.5</u>	86	<u> 26.1</u>	89	<u>9.1</u>	47	<u>9.8</u>	48	<u>7.8</u>	53		Jul-83
Over/Under			1.2		1.3		-2.9		-0.5		-0.4		0.0			
60% MSCI ACWI (Net) / 40% FTSE WGBI			0.4	99	17.1	91	31.3	57	8.4	69	8.9	84	6.3	94		Jul-83
S&P 500			6.2	1	29.7	1	56.4	1	16.8	1	16.3	1	13.9	1	11.4	Jul-83
BBgBarc US Aggregate TR			-3.4	99	-2.1	99	0.7	99	4.7	99	3.1	99	3.4	99	6.9	Jul-83
InvMetrics Public DB > \$1B Net Median			3.4		19.8		31.7		8.9		9.7		7.9		9.1	Jul-83
U.S. Equity Composite	2,528,503,294	17.2	7.3	42	32.4	85	60.3	87	16.6	37	16.1	58	13.6	17	11.7	Jan-85
Russell 3000			<u>6.3</u>	86	<u>33.2</u>	70	<u>62.5</u>	71	<u>17.1</u>	16	<u>16.6</u>	24	<u>13.8</u>	12	<u>11.6</u>	Jan-85
Over/Under			1.0		-0.8		-2.2		-0.5		-0.5		-0.2		0.1	
InvMetrics Public DB > \$1 Billion US Equity Net Median			7.0		34.0		64.0		16.3		16.3		13.2		11.9	Jan-85
U.S. Large Cap Equity Composite	2,126,539,909	14.4	6.2	88	29.8	97	56.4	97	17.3	13	16.5	28	14.0	8	7.8	Aug-99
S&P 500			<u>6.2</u>	88	<u>29.7</u>	98	<u>56.4</u>	97	<u>16.8</u>	26	<u>16.3</u>	49	<u>13.9</u>	10	<u>7.2</u>	Aug-99
Over/Under			0.0		0.1		0.0		0.5		0.2		0.1		0.6	
InvMetrics Public DB > \$1 Billion US Equity Net Median			7.0		34.0		64.0		16.3		16.3		13.2		7.7	Aug-99
S&P 500 Index Fund	2,126,539,909	14.4	6.2	56	29.8	41	56.4	41	17.3	18	16.5	15	14.0	12	6.8	Jan-00
S&P 500			<u>6.2</u>	56	<u>29.7</u>	41	<u>56.4</u>	42	<u>16.8</u>	23	<u>16.3</u>	18	<u>13.9</u>	14	<u>6.8</u>	Jan-00
Over/Under			0.0		0.1		0.0		0.5		0.2		0.1		0.0	
eV US Large Cap Core Equity Net Median			6.5		28.5		54.7		14.6		14.8		12.8		8.0	Jan-00
U.S. Small/Mid Cap Equity Composite	401,963,385	2.7	13.6	1	47.1	2	82.1	2	12.7	99	14.0	96	11.1	93	8.3	Aug-99
NMERB Small/Mid Cap Equity Blended Index			<u>10.9</u>	7	<u>49.6</u>	2	<u>89.4</u>	2	<u>15.3</u>	70	<u>15.9</u>	62	<u>12.0</u>	84	<u>9.3</u>	Aug-99
Over/Under			2.7		-2.5		-7.3		-2.6		-1.9		-0.9		-1.0	
InvMetrics Public DB > \$1 Billion US Equity Net Median			7.0		34.0		64.0		16.3		16.3		13.2		7.7	Aug-99
S&P 400 Mid-Cap	401,963,385	2.7	13.6	25	47.1	23	82.1	24	12.8	58					12.1	Nov-17
Russell 2500			<u>10.9</u>	39	<u>49.6</u>	15	<u>89.4</u>	12	<u>15.3</u>	49	<u>15.9</u>	44	<u>12.2</u>	51	<u>14.5</u>	Nov-17
Over/Under			2.7		-2.5		-7.3		-2.5						-2.4	
eV US Mid Cap Equity Net Median			7.0		38.2		71.6		14.7		14.3		12.3		13.7	Nov-17

Note: Performance shown is net of fees. Fiscal year ends June 30. Policy Index return for quarter ended 3/31/2021 includes return of Private Equity Composite. ILPA PM Benchmark return unavailable at time of report creation.



<sup>1 -</sup> U.S. Small/Mid Cap Equity Composite includes the performance history of the U.S. Small Cap Equity Composite through November 2011.

<sup>2 -</sup> NMERB Small/Mid Cap Equity Blended Benchmark is the Russell 2000 Index through November 2011 and the Russell 2500 Index from December 2011 - forward.

<sup>3 -</sup> Total Fund market value includes \$5,655 from Legacy Assets.

# **PERFORMANCE DETAIL - NON-U.S. EQUITY**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Non-U.S. Equity Composite	2,102,053,123	14.3	3.3	52	31.2	38	54.3	52	6.5	65	10.2	55	3.4	99	6.8	Jul-95
MSCI ACWI ex USA			<u>3.5</u>	46	<u>28.7</u>	77	<u>49.4</u>	81	<u>6.5</u>	65	<u>9.8</u>	75	<u>4.9</u>	96	<u>5.8</u>	Jul-95
Over/Under			-0.2		2.5		4.9		0.0		0.4		-1.5		1.0	
InvMetrics Public DB > \$1 Billion Global ex-US Equity Net Median			3.3		30.9		54.4		7.3		10.3		5.8		6.3	Jul-95
Non-U.S. Developed Mkts Equity Composite	766,840,926	5.2	3.9	24	27.7	83	47.3	89	6.5	71	8.8	82	5.2	87	6.3	Sep-95
MSCI EAFE			<u>3.5</u>	51	<u>25.8</u>	86	<u>44.6</u>	92	<u>6.0</u>	79	<u>8.8</u>	80	<u>5.5</u>	79	<u>5.3</u>	Sep-95
Over/Under			0.4		1.9		2.7		0.5		0.0		-0.3		1.0	
InvMetrics Public DB > \$1 Billion Dev Mkt ex-US Eq Net Median			3.5		28.9		50.9		7.6		10.1		6.6		6.3	Sep-95
BlackRock MSCI EAFE	617,416,024	4.2	3.6	58	26.1	68	45.2	73	6.4	43	9.2	50			6.3	Aug-13
MSCI EAFE			<u>3.5</u>	60	<u>25.8</u>	71	<u>44.6</u>	76	<u>6.0</u>	50	<u>8.8</u>	55	<u>5.5</u>	78	<u>6.0</u>	Aug-13
Over/Under			0.1		0.3		0.6		0.4		0.4				0.3	
eV All EAFE Equity Net Median			4.3		28.7		52.0		6.0		9.2		6.5		6.7	Aug-13
Global Alpha International Small Cap	149,424,903	1.0	5.2	38	34.6	19	57.1	29	-						12.8	Dec-19
MSCI EAFE			<u>3.5</u>	60	<u>25.8</u>	71	<u>44.6</u>	76	<u>6.0</u>	50	<u>8.8</u>	55	<u>5.5</u>	78	<u>11.2</u>	Dec-19
Over/Under			1.7		8.8		12.5								1.6	
MSCI EAFE Small Cap			4.5	49	35.1	17	62.0	18	6.3	44	10.5	29	8.0	24	16.5	Dec-19
eV All EAFE Equity Net Median			4.3		28.7		52.0		6.0		9.2		6.5		13.4	Dec-19



# PERFORMANCE DETAIL - EMERGING MARKET EQUITY

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Non-U.S. Emerging Mkts Equity Composite	1,335,212,196	9.1	2.8	58	33.0	79	58.2	79	6.5	22	10.8	45	2.4	72	7.2	Sep-00
MSCI Emerging Markets Over/Under			<u>2.3</u> 0.5	86	<u>34.1</u> -1.1	71	<u>58.4</u> -0.2	76	<u>6.5</u> 0.0	24	<u>12.1</u> -1.3	24	<u>3.7</u> -1.3	32	<u>8.2</u> -1.0	Sep-00
InvMetrics Public DB > \$1 Billion Emg Mkt Eq Net Median			3.0		35.2		61.5		5.7		10.5		3.0		7.3	Sep-00
Neuberger Berman Emerging Markets	446,829,680	3.0	4.1	45	30.7	85	54.5	83	4.7	72	11.8	60			6.9	Aug-13
MSCI Emerging Markets Over/Under			<u>2.3</u> 1.8	64	<u>34.1</u> -3.4	68	<u>58.4</u> -3.9	72	<u>6.5</u> -1.8	53	<u>12.1</u> -0.3	56	<u>3.7</u>	70	<u>6.8</u> 0.1	Aug-13
eV Emg Mkts Equity Net Median			3.3		36.5		64.4		6.7		12.5		4.6		7.1	Aug-13
RBC GAM EME Fund	436,728,820	3.0	3.1	53	33.5	72	56.3	79							15.4	Aug-19
MSCI Emerging Markets Over/Under			<u>2.3</u> 0.8	64	<u>34.1</u> -0.6	68	<u>58.4</u> -2.1	72	<u>6.5</u>	53	<u>12.1</u>	56	<u>3.7</u>	70	<u>17.7</u> -2.3	Aug-19
eV Emg Mkts Equity Net Median			3.3		36.5		64.4		6.7		12.5		4.6		19.0	Aug-19
UBS Emerging Markets EQ OPP	451,649,005	3.1	1.3	76	34.8	63	63.6	54							25.4	Aug-19
MSCI Emerging Markets Over/Under			<u>2.3</u> -1.0	64	<u>34.1</u> 0.7	68	<u>58.4</u> 5.2	72	<u>6.5</u>	53	<u>12.1</u>	56	<u>3.7</u>	70	<u>17.7</u> 7.7	Aug-19
eV Emg Mkts Equity Net Median			3.3		36.5		64.4		6.7		12.5		4.6		19.0	Aug-19



<sup>1 -</sup> State Street Bank + Trust Co was funded with \$1.5M in June 2019.

<sup>2 -</sup> RBC GAM EME fund was funded with \$285M in July 2019.

<sup>3 -</sup> UBS Emerging Markets EQ OPP funded with \$95M in July 2019.

# PERFORMANCE DETAIL - TOTAL FI AND CORE FI

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Fixed Income Composite	3,533,651,095	24.0	3.5	6	12.1	6	10.7	32	4.7	66	5.7	9	5.8	7	3.2	Jan-85
BBgBarc US Aggregate TR Over/Under			<u>-3.4</u> 6.9	94	<u>-2.1</u> 14.2	99	<u>0.7</u> 10.0	99	<u>4.7</u> 0.0	69	<u>3.1</u> 2.6	98	<u>3.4</u> 2.4	89	<u>6.7</u> -3.5	Jan-85
InvMetrics Public DB > \$1 Billion Fixed Income Net Median			-2.3		2.7		8.7		4.8		4.8		4.1		5.3	Jan-85
Core Fixed Income Composite	763,680,195	5.2	-3.3	78	-1.0	67	3.0	71	4.4	77	3.3	85	3.8	66	5.1	Dec-99
BBgBarc US Aggregate TR Over/Under			<u>-3.4</u> 0.1	81	<u>-2.1</u> 1.1	89	<u>0.7</u> 2.3	88	<u>4.7</u> -0.3	71	<u>3.1</u> 0.2	93	<u>3.4</u> 0.4	84	<u>4.9</u> 0.2	Dec-99
InvMetrics Public DB > \$1 Billion US Fixed Income Net Median			-2.9		0.8		5.5		4.8		3.9		4.1		5.0	Dec-99
Core Fixed Income	763,680,195	5.2	-3.3	55	-1.0	39	3.0	53	4.4	87	3.3	64			3.0	Apr-15
BBgBarc US Aggregate TR Over/Under			<u>-3.4</u> 0.1	61	<u>-2.1</u> 1.1	82	<u>0.7</u> 2.3	90	<u>4.7</u> -0.3	76	3.1 0.2	75	<u>3.4</u>	75	<u>2.9</u> 0.1	Apr-15
eV US Core Fixed Inc Net Median			-3.2		-1.2		3.1		4.9		3.5		3.7		3.1	Apr-15



### PERFORMANCE DETAIL - EMERGING MARKET DEBT

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Non-U.S. Emerging Market Debt Composite	242,146,243	1.6	-3.3	31	6.7	22	18.6	53	1.9	43	4.8	28			2.1	Sep-11
Non-U.S. EMD Custom Benchmark			<u>-5.6</u>	50	<u>3.1</u>	99	<u>14.5</u>	95	<u>1.7</u>	44	<u>4.1</u>	54			<u>0.2</u>	Sep-11
Over/Under			2.3		3.6		4.1		0.2		0.7				1.9	
InvMetrics All DB Emg Mkt Fix Inc Net Median			-5.6		6.0		18.7		-0.1		4.3		2.3		1.7	Sep-11
EMSO	112,785,172	0.8	0.0	7	7.5	21	15.3	79	2.1	61	4.7	61			4.3	Sep-11
JP Morgan GBI - EM Global Diversified Index			<u>-6.7</u>	84	<u>2.9</u>	87	<u>13.0</u>	91	<u>-0.8</u>	83	<u>3.1</u>	85	<u>0.5</u>	82	<u>0.0</u>	Sep-11
Over/Under			6.7		4.6		2.3		2.9		1.6				4.3	
eV All Emg Mkts Fixed Inc Net Median			-4.4		5.4		18.6		3.2		5.2		4.5		4.3	Sep-11
Prudential	129,353,271	0.9	-6.0	78	5.9	39	21.7	28	1.6	66	4.9	56			6.3	Feb-16
50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified			<u>-5.6</u>	73	<u>3.1</u>	87	<u>14.5</u>	83	<u>1.7</u>	66	<u>4.1</u>	67	<u>3.1</u>	65	<u>5.5</u>	Feb-16
Over/Under			-0.4		2.8		7.2		-0.1		0.8				0.8	
eV All Emg Mkts Fixed Inc Net Median			-4.4		5.4		18.6		3.2		5.2		4.5		6.1	Feb-16

<sup>3 -</sup> Non-U.S. EMD Custom Benchmark Composition from 9/1/2011-1/31/2016: JP Morgan GBI-EM Diversified. 2/1/2016 - Current: 50% JPM EMBI Global Diversified / 50% JPM GBI-EM Global Diversified. Note: Performance shown is net of fees. Fiscal year ends June 30.



<sup>1 -</sup> Non-U.S. Emerging Market Debt Composite market value includes \$7,799 in terminated manager account.

<sup>2 -</sup> InvMetrics Public DB > \$1B Emerging Mkt Fixed Income unavailable, universe includes all DB plans.

# PERFORMANCE DETAIL - OPPORTUNISTIC FI

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Opportunistic Credit Composite	2,527,824,657	17.2	6.3		17.2		12.3	-	4.9		6.7	-	6.8		7.8	May-08
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>6.0</u>	May-08
Over/Under			5.1		6.8		-8.6		-0.5		0.3		1.4		1.8	
ICE BofA BB-B US High Yield Constrained TR			0.3		10.6		21.0		6.7		7.4		6.3		7.0	May-08
Beachpoint Combined	495,984,876	3.4	4.9		21.5		34.5		7.6		8.3		7.2		7.1	Mar-04
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.7</u>	Mar-04
Over/Under			3.7		11.1		13.6		2.2		1.9		1.8		1.4	
Beachpoint Total Return	495,984,876	3.4	4.9		21.5		34.5		7.6		8.3		7.2		7.4	Jun-08
50% CS Leveraged Loan / 50% ICE BofA US HY BB- B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>6.0</u>	Jun-08
Over/Under			3.7		11.1		13.6		2.2		1.9		1.8		1.4	
Pimco Disco Combined	102,925,445	0.7	1.6		6.6	-	13.3		5.7		8.8		9.0		10.7	Jul-08
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>6.1</u>	Jul-08
Over/Under			0.4		-3.8		-7.6		0.3		2.4		3.6		4.6	
Pimco Disco II	102,925,445	0.7	1.6		6.6		13.3		5.7		8.8				11.5	Oct-11
50% CS Leveraged Loan / 50% ICE BofA US HY BB- B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>6.1</u>	Oct-11
Over/Under			0.4		-3.8		-7.6		0.3		2.4				5.4	
GoldenTree Combined	232,062,675	1.6	8.7		21.2	-	15.5		7.9		8.7		7.3		8.9	Oct-09
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>6.4</u>	Oct-09
Over/Under			7.5		10.8		-5.4		2.5		2.3		1.9		2.5	
Goldentree II	232,062,675	1.6	8.7		21.2		15.5		7.9		8.7				8.6	Sep-11
50% CS Leveraged Loan / 50% ICE BofA US HY BB- B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.9</u>	Sep-11
Over/Under			7.5		10.8		-5.4		2.5		2.3				2.7	
Medley Capital	28,057,140	0.2	4.9		-9.1		-14.8		-13.9		-8.1				-0.7	Aug-11
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.4</u>	Aug-11
Over/Under			3.7		-19.5		-35.7		-19.3		-14.5				-6.1	



# PERFORMANCE DETAIL - OPPORTUNISTIC FI

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Waterfall - Eden	323,528,907	2.2	7.5		18.9		1.1	-	4.2		7.7				8.3	Aug-11
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.4</u>	Aug-11
Over/Under			6.3		8.5		-19.8		-1.2		1.3				2.9	
Waterfall - Victoria	98,418,191	0.7	5.9		12.3		1.6	-	6.9		9.3				9.4	Aug-11
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.4</u>	Aug-11
Over/Under			4.7		1.9		-19.3		1.5		2.9				4.0	
Gramercy Distressed Opp II	66,558,773	0.5	3.4		-2.4		-9.0		-10.7		-5.9				-1.7	Jul-12
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.4</u>	Jul-12
Over/Under			2.2		-12.8		-29.9		-16.1		-12.3				-7.1	
ICE Canyon	561,693	0.0	-8.8		-42.5		-47.5	-	-16.1		-4.6				-4.0	Jun-12
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.6</u>	Jun-12
Over/Under			-10.0		-52.9		-68.4		-21.5		-11.0				-9.6	
Lone Star VIII	18,481,773	0.1	0.5		10.1		-13.7		-6.4		-6.8				3.5	Oct-13
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.0</u>	Oct-13
Over/Under			-0.7		-0.3		-34.6		-11.8		-13.2				-1.5	
Marathon European Credit Opportunity II	30,621,360	0.2	0.3		-4.4		-3.9		4.0		7.5				6.5	Mar-14
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>4.7</u>	Mar-14
Over/Under			-0.9		-14.8		-24.8		-1.4		1.1				1.8	
Lone Star IX	23,240,026	0.2	16.4		68.7		15.0		6.0		9.8				-7.6	Apr-15
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.0</u>	Apr-15
Over/Under			15.2		58.3		-5.9		0.6		3.4				-12.6	
Kildare European Partners I LP	7,669,892	0.1	15.4		17.9		-28.0		-0.8		5.6				5.7	May-14
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>4.7</u>	May-14
Over/Under			14.2		7.5		-48.9		-6.2		-0.8				1.0	



# PERFORMANCE DETAIL - OPPORTUNISTIC FI

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Black Forest	39,020,843	0.3	-9.8		-9.2	-	-15.6		-2.1		2.5				3.2	Aug-14
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>4.8</u>	Aug-14
Over/Under	74.040.455	0.5	-11.0		-19.6		-36.5		-7.5		-3.9				-1.6	
Gramercy Distressed Opp III	71,319,155	0.5	8.2		7.6	-	2.5	-	-4.6		-1.3				-3.2	Jan-16
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index Over/Under			<u>1.2</u> 7.0		<u>10.4</u> -2.8		<u>20.9</u> -18.4		<u>5.4</u> -10.0		<u>6.4</u> -7.7		<u>5.4</u>		<u>6.5</u> -9.7	Jan-16
GSO Capital Opp III	69,792,005	0.5	7.0 5.1		-2.0 15.8		4.8		-10.0		-1.1				- <del>9</del> .7 8.2	Oct-16
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	09,792,003	0.3	1.2		10.4		<u>20.9</u>	-	5.4		<u>6.4</u>		<u>5.4</u>		<u>5.3</u>	Oct-16
Over/Under			3.9		5.4		-16.1		3.4						2.9	
Cross Ocean ESS II	38,292,621	0.3	7.8		13.8		7.7		6.2						9.7	May-17
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.0</u>	May-17
Over/Under			6.6		3.4		-13.2		0.8						4.7	
OWS CREDIT OPPORTUNITY FD	125,896,600	0.9	5.2		14.7		2.0		4.9						6.3	Jul-17
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.0</u>	Jul-17
Over/Under			4.0		4.3		-18.9		-0.5						1.3	
TAIGA SPECIAL OPP DAC LP	191,219,417	1.3	6.3		10.5		10.6		5.6						7.3	Aug-17
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>4.9</u>	Aug-17
Over/Under			5.1		0.1		-10.3		0.2						2.4	
Sutherland Asset Management	55,976,350	0.4	10.8		68.8		100.3		6.4						3.1	Jul-17
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.0</u>	Jul-17
Over/Under			9.6		58.4		79.4		1.0						-1.9	
OHA Strategic Credit II	79,339,585	0.5	12.6		32.4		12.3		12.5						16.5	Dec-17
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.1</u>	Dec-17
Over/Under	0= =00 0==	0.5	11.4		22.0		-8.6		7.1						11.4	
Lone Star X	85,533,289	0.6	13.8		46.9		17.3		15.4					-	-8.4	Jan-18
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.1</u>	Jan-18
Over/Under			12.6		36.5		-3.6		10.0						-13.5	



# PERFORMANCE DETAIL - OPPORTUNISTIC FI

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Kildare European Partners II LP	37,272,216	0.3	5.7		10.9		13.6								9.3	Nov-18
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.9</u>	Nov-18
Over/Under			4.5		0.5		-7.3								3.4	
Riverstone Credit Partners II	44,008,206	0.3	1.7		2.3		-9.9		-		-				-3.7	Dec-18
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>6.4</u>	Dec-18
Over/Under			0.5		-8.1		-30.8								-10.1	
RCP II N Strategic Credit	15,020,240	0.1	4.1		11.9		7.0		-		-				10.9	Jan-19
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>7.6</u>	Jan-19
Over/Under			2.9		1.5		-13.9								3.3	
OLEA SPECIAL OPPS OFFSHORE I	55,081,575	0.4	0.1		8.6		19.8								17.5	Jun-19
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.8</u>	Jun-19
Over/Under			-1.1		-1.8		-1.1								11.7	
Cross Ocean USD ESS III	94,754,702	0.6	12.0		26.2		25.3								18.7	Nov-19
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>5.6</u>	Nov-19
Over/Under			10.8		15.8		4.4								13.1	
The Varde Fund XIII, L.P.	58,923,100	0.4	3.8		19.4		16.3								15.5	Jan-20
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>4.6</u>	Jan-20
Over/Under			2.6		9.0		-4.6								10.9	
PIMCO Corp Opps Fund III	21,027,645	0.1	41.2		63.1										63.6	May-20
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>16.0</u>	<i>May-20</i>
Over/Under			40.0		52.7										47.6	
BPC Tactical Fund LP	17,236,354	0.1	3.0		7.5										7.5	Jul-20
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>1.2</u>		<u>10.4</u>		<u>20.9</u>		<u>5.4</u>		<u>6.4</u>		<u>5.4</u>		<u>10.4</u>	Jul-20
Over/Under			1.8		-2.9										-2.9	

Note: Performance shown is net of fees. Fiscal year ends June 30. Cross Ocean US ESS III funded 10/17/2019. The Varde Fund XIII, L.P. funded 12/31/2019. PIMCO Corp Opps Fund III funded 4/9/2020. BPC Tactical Fund LP funded 6/16/2020.



# PERFORMANCE DETAIL - GAA/RISK PARITY

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Absolute Return Composite	337,483	0.0														
GAA, Risk Parity, and Other Diversifying Assets	1,717,599,706	11.7	0.3		10.2		16.8		4.9		6.3		5.6		6.9	Oct-09
3-Month LIBOR + 2%			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>3.5</u>		<u>2.9</u>		<u>2.8</u>	Oct-09
Over/Under			-0.2		8.5		14.5		1.2		2.8		2.7		4.1	
Global Asset Allocation/Risk Parity Composite	1,133,427,122	7.7	-1.5	-	10.4	-	18.4	-	4.0		5.8		5.3		6.6	Oct-09
GAA/Risk Parity Custom Index			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>6.0</u>		<u>5.5</u>		<u>6.0</u>	Oct-09
Over/Under			-2.0		8.7		16.1		0.3		-0.2		-0.2		0.6	
InvMetrics Public DB > \$1 Billion Global Tactical Net Median																Oct-09
Global Asset Allocation Composite	370,139,434	2.5	0.7		10.1	-	15.8	-	0.1		3.3				1.7	Nov-12
Credit Suisse Hedge Global Macro			<u>2.8</u>		<u>13.9</u>		<u>19.1</u>		<u>6.3</u>		<u>5.5</u>		<u>4.3</u>		<u>4.1</u>	Nov-12
Over/Under			-2.1		-3.8		-3.3		-6.2		-2.2				-2.4	
Bridgewater Pure Alpha	293,828,228	2.0	-0.6	81	6.7	89	9.2	95	-0.1	95	2.4	89	3.0	88	4.9	Oct-09
Credit Suisse Hedge Global Macro			<u>2.8</u>	41	<u>13.9</u>	56	<u>19.1</u>	70	<u>6.3</u>	46	<u>5.5</u>	63	<u>4.3</u>	75	<u>5.1</u>	Oct-09
Over/Under			-3.4		-7.2		-9.9		-6.4		-3.1		-1.3		-0.2	
eV Global TAA Net Median			2.1		16.5		28.2		6.2		7.3		5.9		6.7	Oct-09
PIMCO All Asset All Authority	76,311,206	0.5	6.0	8	21.5	30	36.4	31	3.5	76	6.0	61			2.7	Jul-13
Credit Suisse Hedge Global Macro			<u>2.8</u>	41	<u>13.9</u>	56	<u>19.1</u>	70	<u>6.3</u>	46	<u>5.5</u>	63	<u>4.3</u>	75	<u>4.0</u>	Jul-13
Over/Under			3.2		7.6		17.3		-2.8		0.5				-1.3	
eV Global TAA Net Median			2.1		16.5		28.2		6.2		7.3		5.9		6.2	Jul-13
Risk Parity	763,287,687	5.2	-2.6	-	10.6	-	19.9	-	6.9		7.6				5.2	Nov-12
GAA/Risk Parity Custom Index			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>6.0</u>		<u>5.5</u>		<u>6.0</u>	Nov-12
Over/Under			-3.1		8.9		17.6		3.2		1.6				-0.8	
Bridgewater All Weather	483,465,573	3.3	-2.9	96	9.5	83	18.2	72	6.2	50	7.3	51	6.6	31	7.5	Oct-09
60% MSCI World (Gross) / 40% FTSE WGBI			<u>0.7</u>	66	<u>17.0</u>	49	<u>31.4</u>	41	<u>9.2</u>	13	<u>9.4</u>	19	<u>7.1</u>	18	<u>7.5</u>	Oct-09
Over/Under			-3.6		-7.5		-13.2		-3.0		-2.1		-0.5		0.0	
eV Global TAA Net Median			2.1		16.5		28.2		6.2		7.3		5.9		6.7	Oct-09
PanAgora	279,822,114	1.9	-2.2	93	12.5	68	23.1	57	8.4	20	8.4	36			8.4	Dec-13
GAA/Risk Parity Custom Index			<u>0.5</u>	69	<u>1.7</u>	98	<u>2.3</u>	98	<u>3.7</u>	76	<u>6.0</u>	61	<u>5.5</u>	58	<u>4.7</u>	Dec-13
Over/Under			-2.7		10.8		20.8		4.7		2.4				3.7	
eV Global TAA Net Median			2.1		16.5		28.2		6.2		7.3		5.9		5.2	Dec-13

<sup>2 -</sup> GAA/Risk Parity Custom Index: 60% MSCI World Half Hedged / 40% CITI WGBI Half Hedged Inception - 6/30/2014; 60% MSCI World / 40% CITI WGBI from 7/1/2014 - present. Note: Performance shown is net of fees. Fiscal year ends June 30.



<sup>1 -</sup> Absolute Return Composite includes \$337,483 in liquidating assets.

# PERFORMANCE DETAIL - GAA/RISK PARITY

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Other Diversifying Assets	584,172,585	4.0	4.0		9.5	-	12.7	-	9.7		-				9.9	Feb-18
3-Month LIBOR + 2%			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>3.5</u>		<u>2.9</u>		<u>3.7</u>	Feb-18
Over/Under			3.5		7.8		10.4		6.0						6.2	
EIG Energy Fund XVII	42,276,216	0.3	7.8		12.7		1.9	-	7.0						7.0	Apr-18
3-Month LIBOR + 2%			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>3.5</u>		<u>2.9</u>		<u>3.7</u>	Apr-18
Over/Under			7.3		11.0		-0.4		3.3						3.3	
The 1609 Fund LTD.	157,465,015	1.1	0.0		3.8		4.2	-	2.4		-				2.8	Feb-18
3-Month LIBOR + 2%			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>3.5</u>		<u>2.9</u>		<u>3.7</u>	Feb-18
Over/Under			-0.5		2.1		1.9		-1.3						-0.9	
OLEA SPECIAL OPPS OFFSHORE I	157,945,260	1.1	0.1		8.7		20.0	-							17.0	Oct-18
3-Month LIBOR + 2%			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>3.5</u>		<u>2.9</u>		<u>3.5</u>	Oct-18
Over/Under			-0.4		7.0		17.7								13.5	
Orchard Liquid Credit Fund	105,893,600	0.7	-2.3		-3.3		-1.6	-							6.6	Oct-18
3-Month LIBOR + 2%			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>3.5</u>		<u>2.9</u>		<u>3.5</u>	Oct-18
Over/Under			-2.8		-5.0		-3.9								3.1	
Orbimed Royalty Credit Opp III	46,051,367	0.3	60.3		112.8		120.5	-							78.2	Oct-19
3-Month LIBOR + 2%			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>3.5</u>		<u>2.9</u>		<u>2.8</u>	Oct-19
Over/Under			59.8		111.1		118.2								75.4	
AE Industrial Partners Aerospace	56,356,802	0.4	7.3		10.0		10.0	-							10.0	Apr-20
3-Month LIBOR + 2%			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>3.5</u>		<u>2.9</u>		<u>2.3</u>	Apr-20
Over/Under			6.8		8.3		7.7								7.7	
Cloverlay Solutions (Bravo)	18,184,323	0.1	-3.5			-									-3.5	Dec-20
3-Month LIBOR + 2%			<u>0.5</u>		<u>1.7</u>		<u>2.3</u>		<u>3.7</u>		<u>3.5</u>		<u>2.9</u>		<u>0.7</u>	Dec-20
Over/Under			-4.0												-4.2	



### **PERFORMANCE DETAIL - REAL ESTATE**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Real Estate Composite	910,010,102	6.2	6.2	1	16.5	1	11.6	5	9.6	1	8.8	1	10.6	6	9.8	Dec-03
NCREIF Property Index			<u>1.7</u>	58	<u>3.7</u>	44	<u>2.6</u>	23	<u>4.9</u>	45	<u>5.8</u>	55	<u>8.8</u>	62	<u>8.4</u>	Dec-03
Over/Under			4.5		12.8		9.0		4.7		3.0		1.8		1.4	
Wilshire REIT			8.8	1	21.9	1	34.8	1	9.0	1	5.0	90	8.5	70	8.7	Dec-03
InvMetrics Public DB > \$1 Billion Real Estate Net Median			1.8		3.1		1.1		4.6		6.1		9.3		7.1	Dec-03
Public Real Estate Composite	314,805,484	2.1	11.3	1	27.2	1	40.0	1	9.9	1	5.4	65	8.2	86	8.6	Dec-03
Wilshire REIT			<u>8.8</u>	1	<u>21.9</u>	1	<u>34.8</u>	1	<u>9.0</u>	1	<u>5.0</u>	90	<u>8.5</u>	70	<u>8.7</u>	Dec-03
Over/Under			2.5		5.3		5.2		0.9		0.4		-0.3		-0.1	
InvMetrics Public DB > \$1 Billion Real Estate Net Median			1.8		3.1		1.1		4.6		6.1		9.3		7.1	Dec-03
Brookfield	314,805,484	2.1	11.3	1	27.2	11	40.0	20	9.9	67	5.6	64			8.4	Jul-11
MSCI US REIT			<u>8.5</u>	34	<u>22.2</u>	50	<u>36.1</u>	41	<u>8.2</u>	84	<u>4.0</u>	86	<u>7.2</u>	94	<u>7.0</u>	Jul-11
Over/Under			2.8		5.0		3.9		1.7		1.6				1.4	
eV US REIT Net Median			8.0		22.2		35.2		11.1		6.3		9.2		9.1	Jul-11
Private Real Estate Composite	595,204,617	4.0	3.7	6	11.5	2	0.4	81	9.6	3	10.8	1	12.7	1	8.4	Jan-08
NCREIF Property Index			<u>1.7</u>	64	<u>3.7</u>	60	<u>2.6</u>	19	<u>4.9</u>	33	<u>5.8</u>	62	<u>8.8</u>	46	<u>5.8</u>	Jan-08
Over/Under			2.0		7.8		-2.2		4.7		5.0		3.9		2.6	
InvMetrics Public DB Real Estate Priv Net Median			2.0		4.1		2.1		4.9		6.2		8.7		4.5	Jan-08
U.S. Private Real Estate	595,204,617	4.0	3.7		11.5		0.4		9.6		10.9		12.9		8.9	Jan-08
NCREIF Property Index			<u>1.7</u>		<u>3.7</u>		<u>2.6</u>		<u>4.9</u>		<u>5.8</u>		<u>8.8</u>		<u>5.8</u>	Jan-08
Over/Under			2.0		7.8		-2.2		4.7		5.1		4.1		3.1	

<sup>1</sup> - InvMetrics Public DB > \$1B Real Estate Private is unavailable, universe includes all public funds. Note: Performance is shown net of fees. Fiscal year ends June 30.



### **PERFORMANCE DETAIL - PE & RA**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Private Equity Composite	2,527,716,068	17.2	9.8	32	21.5	76	16.1	76	13.0	60	13.0	55	13.6	38	7.9	Jun-06
ILPA Private Markets Benchmark (1 Qtr Lag) Over/Under			<u>9.8</u> 0.0	32	<u>31.8</u> -10.3	33	<u>19.8</u> -3.7	62	<u>14.1</u> -1.1	50	<u>14.0</u> -1.0	47	<u>12.7</u> 0.9	54	<u>12.2</u> -4.3	Jun-06
InvMetrics Public DB > \$1 Billion Private Equity Net Median			7.9		27.0		23.3		14.0		13.5		13.0		10.3	Jun-06
Real Assets Composite	1,190,359,611	8.1	2.3	52	7.8	53	0.4	76	6.8	21	7.7	10	5.0	51	3.1	Jul-08
CPI + 4% (Seasonally Adjusted) Over/Under			<u>2.2</u> 0.1	55	<u>6.1</u> 1.7	64	<u>6.8</u> -6.4	55	<u>6.1</u> 0.7	26	<u>6.3</u> 1.4	19	<u>5.8</u> -0.8	39	<u>5.6</u> -2.5	Jul-08
InvMetrics Public DB > \$1 Billion Real Assets/Commodities Net Median			2.3		7.9		7.4		4.1		4.9		5.0		2.0	Jul-08
Infrastructure Composite	479,756,688	3.3	2.0		9.8		8.0		7.9		9.1		5.7		4.0	Jul-08
Infrastructure	473,079,677	3.2	1.9		10.2		8.3		8.5		8.6		5.3		3.7	Jul-08
CPI + 4% (Seasonally Adjusted) Over/Under			<u>2.2</u> -0.3		<u>6.1</u> 4.1		<u>6.8</u> 1.5		<u>6.1</u> 2.4		<u>6.3</u> 2.3		<u>5.8</u> -0.5	-	<u>5.6</u> -1.9	Jul-08
International Infrastructure	6,677,012	0.0	7.8		-7.9		-5.8		-0.9		18.5				-0.9	Jan-13
CPI + 4% (Seasonally Adjusted) Over/Under			<u>2.2</u> 5.6		<u>6.1</u> -14.0		<u>6.8</u> -12.6		<u>6.1</u> -7.0		<u>6.3</u> 12.2		<u>5.8</u>		<u>5.7</u> -6.6	Jan-13
Natural Resources	710,602,922	4.8	2.5		6.5	-	-4.6	-	6.0		6.6		5.0		3.9	Mar-09
Harvest Fund	43,876,981	0.3	18.7		31.6		74.9		-1.1						-3.0	Aug-16
Alerian MLP Index			<u>22.0</u>		<u>35.3</u>		<u>103.1</u>		<u>-3.0</u>		<u>-1.3</u>		<u>-0.9</u>		<u>-5.2</u>	Aug-16
Over/Under			-3.3		-3.7		-28.2		1.9						2.2	
Energy	222,397,145	1.5	1.4		8.5		-24.2		6.5		11.8				0.5	Jan-14
CPI + 4% (Seasonally Adjusted) Over/Under			<u>2.2</u> -0.8		<u>6.1</u> 2.4		<u>6.8</u> -31.0		<u>6.1</u> 0.4		<u>6.3</u> 5.5		<u>5.8</u>		<u>5.8</u> -5.3	Jan-14
Agriculture Composite	196,433,895	1.3	2.4		5.2		7.5		6.8		4.8				4.7	Aug-12
NCREIF Farmland Over/Under			<u>0.1</u> 2.3		<u>2.7</u> 2.5		<u>3.3</u> 4.2		<u>4.4</u> 2.4		<u>5.3</u> -0.5		<u>10.2</u>		<u>9.5</u> -4.8	Aug-12
Timber Composite	111,738,974	0.8	0.8		2.1		1.9		3.0		3.8		4.9		3.8	Mar-09
NCREIF Timberland Index Over/Under			<u>0.8</u> 0.0		<u>1.4</u> 0.7		<u>1.5</u> 0.4		<u>1.7</u> 1.3		<u>2.5</u> 1.3		<u>4.6</u> 0.3		<u>3.4</u> 0.4	Mar-09
	68,690,936	0.5	-0.2		1.6		0.4		4.9		7.1		2.3		2.3	Mar-11
Mitigation Banking CPI + 4% (Seasonally Adjusted)	00,030,330	0.3	-0.2 <u>2.2</u>		6.1		6.8		4.9 <u>6.1</u>		6.3		2.3 <u>5.8</u>		2.3 <u>5.8</u>	Mar-11
Over/Under			-2.4		<u>-4.5</u>		-6.1		-1.2		0.8		-3.5		-3.5	iviai-i i
Water Property Investor, L.P.	67,464,990	0.5	3.1		2.1		2.8		12.3		8.0				8.3	Jan-15
CPI + 4% (Seasonally Adjusted)  Over/Under  1 - Energy composite includes Five Point Cap Lime P	and Francisch DD No	t	2.2 0.9	 	<u>6.1</u> -4.0		<u>6.8</u> -4.0		<u>6.1</u> 6.2		<u>6.3</u> 1.7		<u>5.8</u>		<u>5.9</u> 2.4	Jan-15

 $<sup>{</sup>f 1}$  - Energy composite includes Five Point Cap, Lime Rock, Enervest, BP Natural Gas, and Bluescape Energy.

Note: Performance shown is net of fees. Fiscal year ends June 30. Q1 ILPA Private Markets Benchmark is Private Equity Composite return for Q1 2021.



<sup>2 -</sup> Agriculture Composite contains Halderman Farm Mgmt Services, Hancock Agriculture, and Blue Road Capital L.P.

<sup>3 -</sup> Timber Composite contains Brookfield Brazil Timber, Conservation Forestry II, Conservation Forestry IV, and ETO II Operating Partnership.

### **PERFORMANCE DETAIL - PE & RA**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Private Equity Composite	2,527,716,068	17.2	9.8	32	21.5	76	16.1	76	13.0	60	13.0	55	13.6	38	7.9	Jun-06
ILPA Private Markets Benchmark (1 Qtr Lag) Over/Under			<u>13.2</u> -3.4	12	<u>36.0</u> -14.5	21	<u>23.5</u> -7.4	46	<u>15.2</u> -2.2	43	<u>14.7</u> -1.7	43	<u>13.1</u> 0.5	44	<u>12.4</u> -4.5	Jun-06
InvMetrics Public DB > \$1 Billion Private Equity Net Median			7.9		27.0		23.3		14.0		13.5		13.0		10.3	Jun-06
Real Assets Composite	1,190,359,611	8.1	2.3	52	7.8	53	0.4	76	6.8	21	7.7	10	5.0	51	3.1	Jul-08
CPI + 4% (Seasonally Adjusted) Over/Under			<u>2.2</u> 0.1	55	<u>6.1</u> 1.7	64	<u>6.8</u> -6.4	55	<u>6.1</u> 0.7	26	<u>6.3</u> 1.4	19	<u>5.8</u> -0.8	39	<u>5.6</u> -2.5	Jul-08
InvMetrics Public DB > \$1 Billion Real Assets/Commodities Net Median			2.3		7.9		7.4		4.1		4.9		5.0		2.0	Jul-08
Infrastructure Composite	479,756,688	3.3	2.0		9.8	-	8.0	-	7.9		9.1		5.7		4.0	Jul-08
Infrastructure	473,079,677	3.2	1.9		10.2		8.3	-	8.5		8.6		5.3		3.7	Jul-08
CPI + 4% (Seasonally Adjusted) Over/Under			<u>2.2</u> -0.3		<u>6.1</u> 4.1		<u>6.8</u> 1.5		<u>6.1</u> 2.4		<u>6.3</u> 2.3		<u>5.8</u> -0.5		<u>5.6</u> -1.9	Jul-08
International Infrastructure	6,677,012	0.0	7.8		-7.9		-5.8	-	-0.9		18.5				-0.9	Jan-13
CPI + 4% (Seasonally Adjusted) Over/Under			<u>2.2</u> 5.6		<u>6.1</u> -14.0	-	<u>6.8</u> -12.6		<u>6.1</u> -7.0		<u>6.3</u> 12.2		<u>5.8</u>		<u>5.7</u> -6.6	Jan-13
Natural Resources	710,602,922	4.8	2.5		6.5	-	-4.6	-	6.0		6.6		5.0		3.9	Mar-09
Harvest Fund	43,876,981	0.3	18.7		31.6		74.9		-1.1						-3.0	Aug-16
Alerian MLP Index Over/Under			<u>22.0</u> -3.3		<u>35.3</u> -3.7		<u>103.1</u> -28.2		<u>-3.0</u> 1.9		<u>-1.3</u>		<u>-0.9</u>		<u>-5.2</u> 2.2	Aug-16
Energy	222,397,145	1.5	1.4		8.5		-24.2		6.5		11.8				0.5	Jan-14
CPI + 4% (Seasonally Adjusted) Over/Under			<u>2.2</u> -0.8		<u>6.1</u> 2.4	-	<u>6.8</u> -31.0	-	<u>6.1</u> 0.4		<u>6.3</u> 5.5		<u>5.8</u>	-	<u>5.8</u> -5.3	Jan-14
Agriculture Composite	196,433,895	1.3	2.4		5.2		7.5		6.8		4.8				4.7	Aug-12
NCREIF Farmland Over/Under			<u>0.1</u> 2.3		<u>2.7</u> 2.5		3.3 4.2		<u>4.4</u> 2.4		<u>5.3</u> -0.5		<u>10.2</u>		<u>9.5</u> -4.8	Aug-12
Timber Composite	111,738,974	0.8	8.0		2.1		1.9		3.0		3.8		4.9		3.8	Mar-09
NCREIF Timberland Index Over/Under			<u>0.8</u> 0.0		<u>1.4</u> 0.7		<u>1.5</u> 0.4		<u>1.7</u> 1.3		<u>2.5</u> 1.3		<u>4.6</u> 0.3		<u>3.4</u> 0.4	Mar-09
Mitigation Banking	68,690,936	0.5	-0.2		1.6		0.7		4.9		7.1		2.3		2.3	Mar-11
CPI + 4% (Seasonally Adjusted) Over/Under			<u>2.2</u> -2.4		<u>6.1</u> -4.5		<u>6.8</u> -6.1		<u>6.1</u> -1.2		<u>6.3</u> 0.8		<u>5.8</u> -3.5		<u>5.8</u> -3.5	Mar-11
Water Property Investor, L.P.	67,464,990	0.5	3.1		2.1		2.8		12.3		8.0				8.3	Jan-15
CPI + 4% (Seasonally Adjusted)  Over/Under  1 - Energy composite includes Five Point Cap Lime P.	and Francisch DD No.		<u>2.2</u> 0.9		<u>6.1</u> -4.0		<u>6.8</u> -4.0	-	<u>6.1</u> 6.2		<u>6.3</u> 1.7		<u>5.8</u>	-	<u>5.9</u> 2.4	Jan-15

 $<sup>1\</sup>hbox{ - Energy composite includes Five Point Cap, Lime Rock, Enervest, BP Natural Gas, and Bluescape Energy.}$ 

<sup>3 -</sup> Timber Composite contains Brookfield Brazil Timber, Conservation Forestry II, Conservation Forestry IV, and ETO II Operating Partnership. Note: Performance shown is net of fees. Fiscal year ends June 30.



<sup>2 -</sup> Agriculture Composite contains Halderman Farm Mgmt Services, Hancock Agriculture, and Blue Road Capital L.P.

# **PERFORMANCE DETAIL - CASH**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Cash	222,305,483	1.5														
Cash	220,051,433	1.5	0.0		0.1		0.1		1.8		1.7		1.0		1.2	Dec-99
91 Day T-Bills			<u>0.0</u>		<u>0.1</u>		<u>0.1</u>		<u>1.4</u>		<u>1.1</u>		<u>0.6</u>		<u>1.6</u>	Dec-99
Over/Under			0.0		0.0		0.0		0.4		0.6		0.4		-0.4	
NM ERB Cash	2,147,714	0.0	0.0		0.0		0.0	-	0.8		0.5		0.7		0.9	Jun-00
91 Day T-Bills			<u>0.0</u>		<u>0.1</u>		<u>0.1</u>		<u>1.4</u>		<u>1.1</u>		<u>0.6</u>		<u>1.5</u>	Jun-00
Over/Under			0.0		-0.1		-0.1		-0.6		-0.6		0.1		-0.6	
Local Government Investment Pool (LGIP) at STO	106,336	0.0	0.0		0.1		0.3		1.5		1.1				1.0	Jul-15
91 Day T-Bills			<u>0.0</u>		<u>0.1</u>		<u>0.1</u>		<u>1.4</u>		<u>1.1</u>		<u>0.6</u>		<u>1.0</u>	Jul-15
Over/Under			0.0		0.0		0.2		0.1		0.0				0.0	



### OTHER DIVERSIFYING ASSETS PERFORMANCE

					Time Weighted	
Vintage Year	Investment	Commitment	Paid In Capital	Current MV	Returns Since	Inception Date
					Inception	
2017	EIG Energy Fund XVII	100,000,000	37,001,497	42,276,216	7.0	Apr-18
2017	1609 Fund	150,000,000	150,000,000	157,465,015	2.8	Feb-18
2018	Olea Special Opportunities Offshore Fund	135,000,000	135,000,000	157,945,260	17.0	Oct-18
2018	Orchard Liquid Credit Fund	100,000,000	100,000,000	105,893,600	6.6	Nov-18
2019	OrbiMed Royalty & Credit Opps. III	100,000,000	20,000,000	46,051,367	78.2	Oct-19
2019	AE Industrial AA	150,000,000	52,501,327	56,356,802	10.0	Apr-20
2019	Cloverlay	150,000,000	18,842,988	18,184,983	-3.5	Dec-20
Total	Other Diversifying Assets	885,000,000	513,345,812	584,173,243	9.9	Feb-18

<sup>\*</sup>Market Values and Performance data are through 3/31/2021

#### Correlation of Monthly Returns Since Inception

	Total Fund	U.S. Equity	Non U.S. Developed Markets Equity	Non U.S. Emerging Markets Equity	Core Fixed Income	Non U.S. Emerging Markets Debt	Opportunistic Credit	Real Estate	Private Equity	Real Assets	Other Diversifying Assets	EIG Energy Fund	1609 Fund	OLEA	Orchard	OLEA	Orchard
Diversifying Assets	0.16	0.08	0.12	0.14	0.06	0.17	-0.03	0.24	-0.02	-0.10	1.00						
EIG Energy Fund	-0.13	-0.34	-0.21	-0.28	-0.16	0.37	-0.12	0.48	0.16	-0.28	0.19	1.00					
1609 Fund	0.01	-0.01	-0.01	-0.09	0.01	0.04	0.07	0.11	0.11	-0.07	0.41	0.01	1.00				
OLEA	0.40	0.45	0.47	0.42	0.31	80.0	0.19	-0.24	-0.07	0.21	0.58	-0.23	-0.08	1.00			
Orchard	-0.73	-0.52	-0.59	-0.63	-0.70	-0.65	-0.58	-0.13	-0.22	-0.36	-0.01	-0.17	0.10	-0.15	1.00		
Orbimed	0.09	-0.11	-0.10	0.13	0.02	0.24	0.06	0.42	0.08	-0.20	0.66	0.05	0.04	-0.09	-0.13	1.00	
AE Industrial	-0.27	-0.28	-0.33	-0.53	-0.39	0.01	0.16	0.43	0.11	-0.52	0.21	0.24	0.20	-0.22	-0.04	0.19	1.00



### PRIVATE MARKETS PERFORMANCE SUMMARY

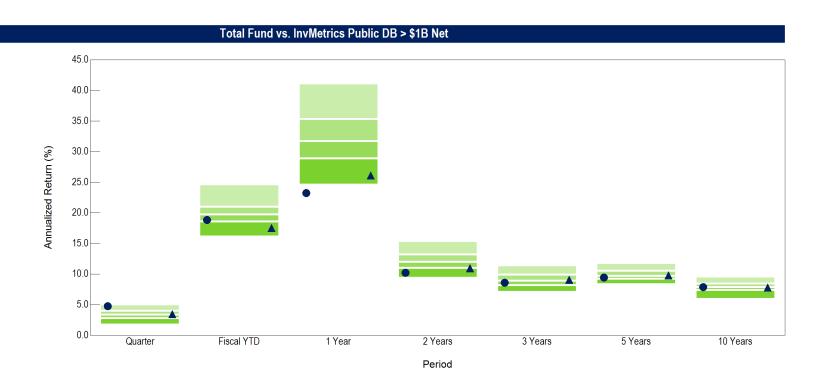
		Private Equi	ty Dollar Wei	ghted vs. Tir	ne Weighted	Performance	
	3 Mo (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)	Inception (%)	Inception Date
Dollar Weighted							
Total Net IRR	10.0	12.1	11.6	12.2	13.5	12.4	Jun-06
Time Weighted							
Net Time Weighted Return	6.7	7.9	10.5	11.1	13.0	7.4	Jun-06
		Real Estate	Dollar Weig	hted vs. Time	e Weighted P		
	3 Mo (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)	Inception (%)	Inception Date
Dollar Weighted							
Total Net IRR						10.3	Jan-08
Time Weighted							
Net Time Weighted Return	4.7	13.6	14.5	13.7	14.2	9.1	Jan-08
		Infrastructu	re Dollar Wei	ghted vs. Tin	ne Weighted		
	3 Mo (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)	Inception (%)	Inception Date
Dollar Weighted							
Total Net IRR						6.9	Jul-08
Time Weighted							
Net Time Weighted Return	2.0	8.0	7.9	9.1	5.7	4.0	Jul-08
	Na	atural Resou	rces Dollar W	leighted vs. ī	Time Weighte	ed Performan	ce
	3 Mo (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)	Inception (%)	Inception Date
Dollar Weighted							
Total Net IRR						5.1	Mar-09
Time Weighted							

<sup>\*</sup> Private Equity, Real Estate and Natural Resources time weighted performance as of 12/31/2020; Infrastructure is as of 3/31/2021

<sup>\*</sup> Private Equity, Real Estate and Natural Resources dollar weighted performance is as of 9/30/2020; Infrastructure is as of 12/31/2020



### TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

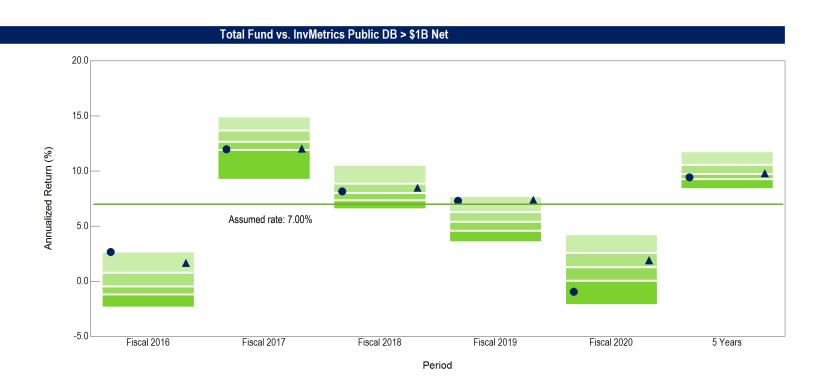


	Return (Rank)										
5th Percentile	5.0	24.	3	41.1	15.4	1	11.4	11.8		9.6	
25th Percentile	4.0	21.	)	35.4	13.2	2	9.9	10.6		8.4	
Median	3.4	19.	3	31.7	12.0	)	8.9	9.7		7.9	
75th Percentile	2.8	18.	3	28.9	11.0	)	8.2	9.3		7.4	
95th Percentile	1.7	16.	2	24.6	9.4	1	7.1	8.4		6.0	
# of Portfolios	83	8	3	83	83	3	83	83		75	
Total Fund	4.7	(10) 18.	(65)	23.2	(99) 10.2	2 (91)	8.6	(64) 9.4	(69)	7.8	(52)
Policy Index	3.5	(49) 17.	(86)	26.1	(89) 10.9	9 (77)	9.1	(47) 9.8	(48)	7.8	(53)

Note: Ranks are based on net returns.



### TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE



	Return (Rank)						
5th Percentile	2.7	14.9	10.5		7.7	4.2	11.8
25th Percentile	0.8	13.7	8.8		6.3	2.6	10.6
Median	-0.5	12.7	8.0		5.4	1.3	9.7
75th Percentile	-1.2	11.9	7.3		4.6	0.0	9.3
95th Percentile	-2.4	9.2	6.5		3.5	-2.2	8.4
# of Portfolios	55	65	51		77	71	83
Total Fund	2.6	(6) 12.0	(71) 8.1	(46)	7.3 (9	-1.0 (9)	9.4 (69)
▲ Policy Index	1.7	(9) 12.0	(68) 8.5	(33)	7.4 (7	1.9 (3)	9.8 (48)

Note: Ranks are based on net returns.



# **TOTAL FUND ATTRIBUTION ANALYSIS**

Attribution Summary 3 Months Ending March 31, 2021							
	Wtd. Actual Return		Excess Return	Selection Effect	Allocation Effect	Total Effects	
U.S. Large Cap Equity Composite	6.2%	6.2%	0.0%	0.0%	0.0%	0.0%	
U.S. Small/Mid Cap Equity Composite	13.6%	10.9%	2.7%	0.1%	0.0%	0.0%	
Non-U.S. Developed Mkts Equity Composite	3.9%	3.5%	0.4%	0.0%	0.0%	0.0%	
Non-U.S. Emerging Mkts Equity Composite	2.8%	2.3%	0.6%	0.1%	0.0%	0.1%	
Core Fixed Income Composite	-3.3%	-3.4%	0.1%	0.0%	0.0%	0.0%	
Non-U.S. Emerging Market Debt Composite	-3.3%	-5.6%	2.3%	0.0%	0.0%	0.1%	
Opportunistic Credit Composite	6.3%	1.2%	5.2%	0.9%	0.0%	0.9%	
Absolute Return Composite	-0.2%	0.5%	-0.7%	0.0%	0.0%	0.0%	
Global Asset Allocation/Risk Parity Composite	-1.5%	0.5%	-2.1%	-0.2%	-0.1%	-0.3%	
Other Diversifying Assets	4.0%	0.5%	3.5%	0.1%	0.1%	0.2%	
Public Real Estate Composite	11.3%	8.8%	2.5%	0.0%	0.0%	0.0%	
Private Real Estate Composite	3.7%	1.7%	1.9%	0.1%	0.0%	0.1%	
Private Equity Composite	9.8%	9.8%	0.0%	-0.1%	0.1%	0.1%	
Real Assets Composite	2.3%	2.2%	0.1%	0.0%	0.0%	0.0%	
Cash Total	0.0% 4.7%	0.0% 3.5%	0.0%	0.0% 1.1%	0.0%	0.0% 1.3%	
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		Attribution	Summary			
	1 Y	ear Ending N		21		
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Large Cap Equity Composite	56.4%	56.4%	0.1%	0.0%	-0.8%	-0.8%
U.S. Small/Mid Cap Equity Composite	82.1%	89.4%	-7.3%	-0.1%	-0.3%	-0.4%
Non-U.S. Developed Mkts Equity Composite	47.3%	44.6%	2.8%	0.1%	-0.1%	0.0%
Non-U.S. Emerging Mkts Equity Composite	58.2%	58.4%	-0.2%	0.0%	-0.2%	-0.2%
Core Fixed Income Composite	3.0%	0.7%	2.3%	0.2%	0.0%	0.2%
Non-U.S. Emerging Market Debt Composite	18.6%	14.5%	4.1%	0.1%	0.0%	0.1%
Opportunistic Credit Composite	12.3%	20.9%	-8.7%	-1.7%	-0.1%	-1.8%
Absolute Return Composite	-4.6%	2.2%	-6.8%	0.0%	0.0%	0.0%
Global Asset Allocation/Risk Parity Composite	18.4%	2.3%	16.1%	1.6%	-0.6%	0.9%
Other Diversifying Assets	12.7%	2.3%	10.4%	0.5%	0.6%	1.0%
Public Real Estate Composite	40.0%	34.8%	5.2%	0.1%	0.0%	0.1%
Private Real Estate Composite	0.4%	2.6%	-2.2%	-0.1%	0.3%	0.2%
Private Equity Composite	16.1%	18.9%	-2.7%	-0.8%	-0.5%	-1.3%
Real Assets Composite	0.4%	6.8%	-6.5%	-0.7%	0.0%	-0.7%
Cash	0.1%	0.1%	0.0%	0.0%	-0.3%	-0.3%
Total	23.2%	26.1%	-2.9%	-0.9%	-2.0%	-2.9%



# **TOTAL FUND ATTRIBUTION ANALYSIS**

	Attribution Summary 3 Years Ending March 31, 2021							
	Wtd. Actual Return		Excess Return	Selection Effect	Allocation Effect	Total Effects		
U.S. Large Cap Equity Composite	17.3%	16.8%	0.5%	0.1%	-0.2%	-0.1%		
U.S. Small/Mid Cap Equity Composite	12.7%	15.3%	-2.7%	-0.1%	-0.1%	-0.2%		
Non-U.S. Developed Mkts Equity Composite	6.5%	6.0%	0.5%	0.0%	0.0%	0.0%		
Non-U.S. Emerging Mkts Equity Composite	6.5%	6.5%	0.0%	0.0%	-0.1%	-0.1%		
Core Fixed Income Composite	4.4%	4.7%	-0.2%	0.0%	0.0%	0.0%		
Non-U.S. Emerging Market Debt Composite	1.9%	1.7%	0.2%	0.0%	0.0%	0.0%		
Opportunistic Credit Composite	4.9%	5.4%	-0.6%	-0.1%	0.0%	-0.2%		
Absolute Return Composite	-2.9%	3.4%	-6.4%	0.0%	0.0%	0.0%		
Global Asset Allocation/Risk Parity Composite	4.0%	3.7%	0.4%	0.0%	-0.1%	-0.1%		
Other Diversifying Assets	9.7%	3.7%	6.1%	0.2%	0.1%	0.3%		
Public Real Estate Composite	9.9%	9.0%	0.9%	0.0%	-0.1%	0.0%		
Private Real Estate Composite	9.6%	4.9%	4.7%	0.2%	0.0%	0.3%		
Private Equity Composite	13.0%	14.4%	-1.4%	-0.3%	0.0%	-0.3%		
Real Assets Composite	6.8%	6.1%	0.7%	0.0%	0.0%	0.0%		
Cash Total	1.6% 8.6%	1.4% 9.1%	-0.5%	0.0%	-0.5%	0.0% -0.5%		
Total	0.0 /0	3.170	-0.5/0	0.0 /0	-0.5/0	-0.5 /8		

	Attribution Summary							
	5 Ye Wtd. Actual Return	ears Ending I Wtd. Index Return	<b>March 31, 20</b> Excess Return	Selection Effect	Allocation Effect	Total Effects		
U.S. Large Cap Equity Composite	16.5%	16.3%	0.2%	0.0%	-0.1%	-0.1%		
U.S. Small/Mid Cap Equity Composite	14.0%	15.9%	-2.0%	-0.1%	0.0%	-0.1%		
Non-U.S. Developed Mkts Equity Composite	8.8%	8.8%	0.0%	0.0%	0.0%	0.0%		
Non-U.S. Emerging Mkts Equity Composite	10.8%	12.1%	-1.2%	-0.1%	0.0%	-0.2%		
Core Fixed Income Composite	3.3%	3.1%	0.1%	0.0%	-0.1%	-0.1%		
Non-U.S. Emerging Market Debt Composite	4.8%	4.1%	0.7%	0.0%	0.0%	0.0%		
Opportunistic Credit Composite	6.7%	6.4%	0.3%	0.0%	0.0%	0.0%		
Absolute Return Composite	-2.0%	3.1%	-5.1%	0.0%	0.0%	0.0%		
Global Asset Allocation/Risk Parity Composite	5.8%	5.2%	0.6%	0.1%	-0.1%	0.0%		
Other Diversifying Assets				0.1%	0.1%	0.2%		
Public Real Estate Composite	5.4%	5.0%	0.4%	0.0%	0.0%	0.0%		
Private Real Estate Composite	10.8%	5.8%	5.0%	0.2%	0.0%	0.2%		
Private Equity Composite	13.0%	14.8%	-1.7%	-0.3%	0.0%	-0.3%		
Real Assets Composite	7.7%	6.3%	1.4%	0.1%	0.0%	0.1%		
Cash	1.5%	1.1%	0.3%	0.0%	-0.1%	-0.1%		
Total	9.4%	9.8%	-0.4%	0.0%	-0.4%	-0.4%		

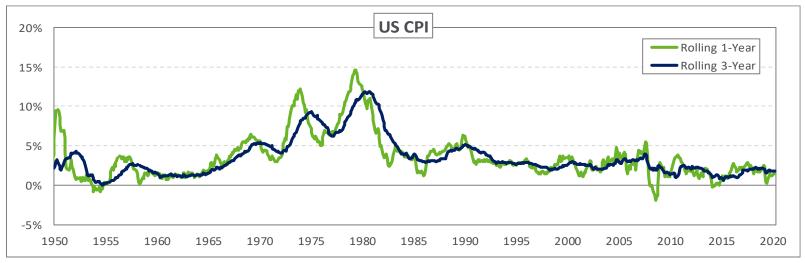


# **APPENDIX**

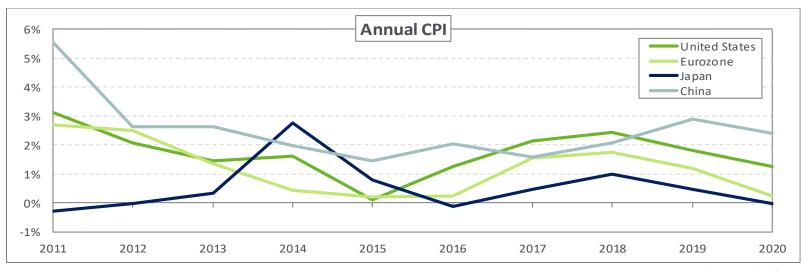
NEPC, LLC —

# **MACRO**

### INFLATION



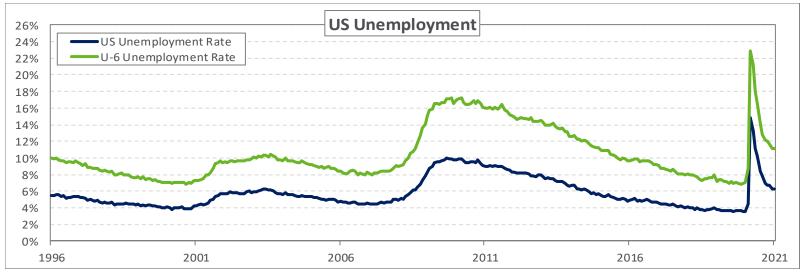
Source: Bureau of Labor Statistics, FactSet



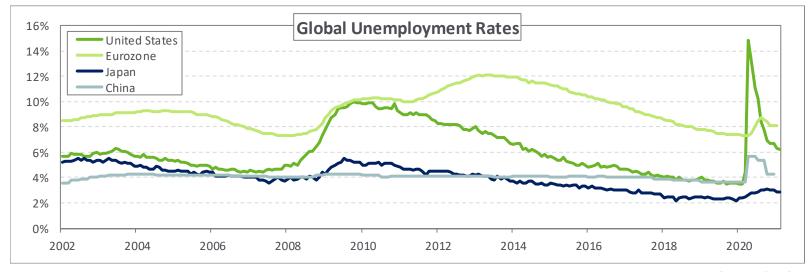
Source: FactSet



### **UNEMPLOYMENT**



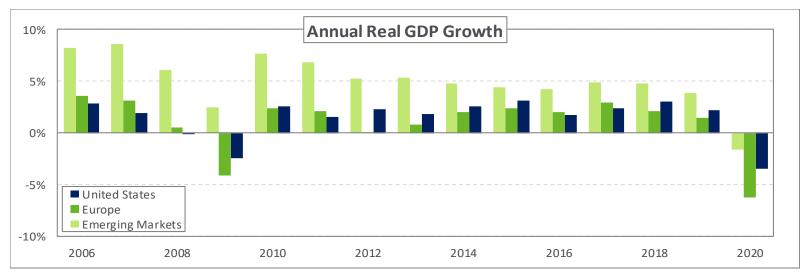




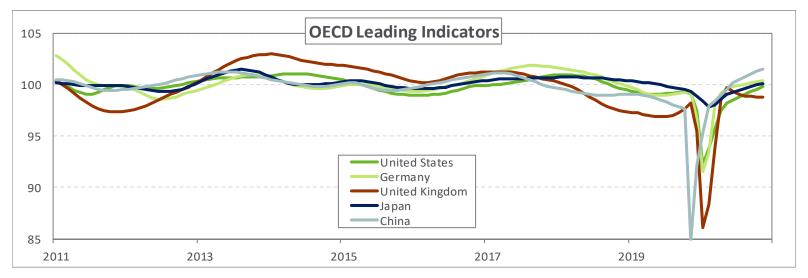
Source: FactSet



### **ECONOMIC INDICATORS**



Source: Bureau of Economic Analysis, Oxford Economics, FactSet



Source: OECD, FactSet



# **GROSS DOMESTIC PRODUCT**



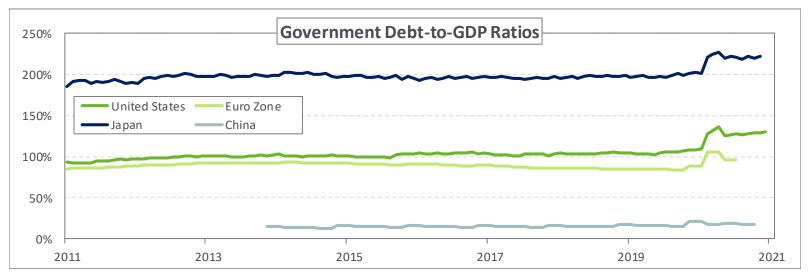
Source: Bureau of Economic Analysis, FactSet



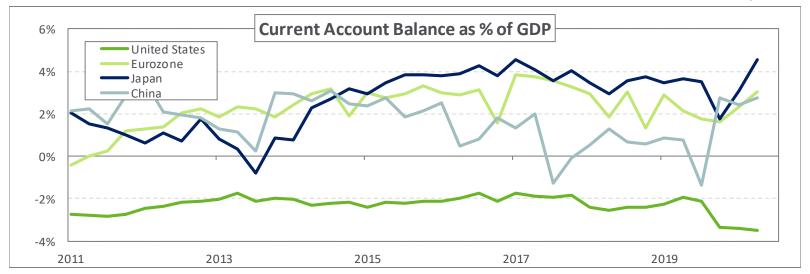
Source: IMF, FactSet



# GROSS DOMESTIC PRODUCT METRICS



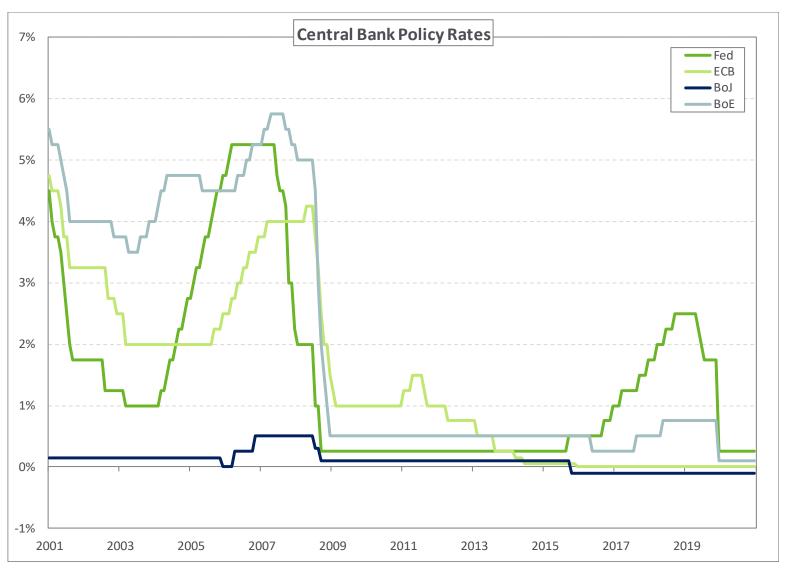
Source: IMF, FactSet



Source: FactSet



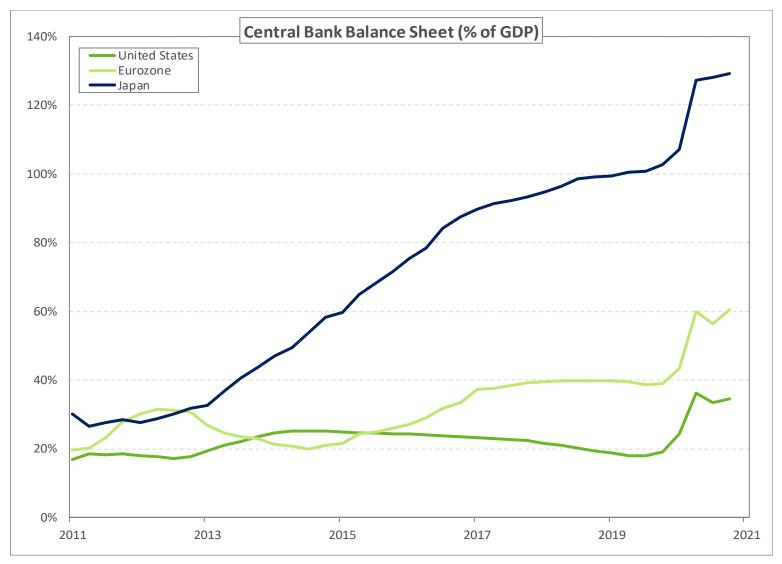
### **CENTRAL BANK RATES**







### **CENTRAL BANK BALANCE SHEETS**



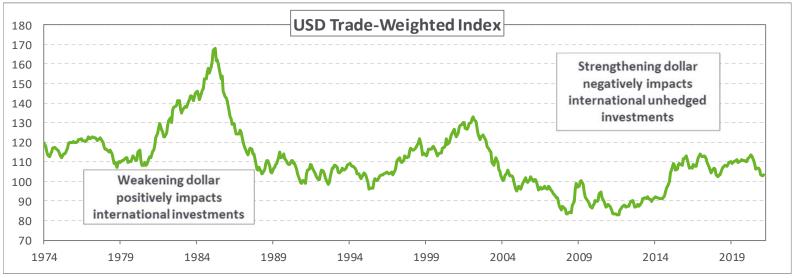




### **CURRENCIES**

		% C	hange Relative to	USD
Currencies	Spot	1 Month	YTD	1 Year
Euro	1.18	-3.2%	-3.9%	7.1%
British Pound	1.38	-1.3%	0.9%	11.3%
Japanese Yen	110.50	-3.6%	-6.6%	-2.3%
Swiss Franc	0.94	-3.8%	-6.1%	2.8%
Australian Dollar	0.76	-1.6%	-1.3%	24.4%
Chinese Yuan	6.56	-1.4%	-0.2%	8.2%
Brazilian Real	5.64	-1.2%	-8.0%	-8.1%
Russian Ruble	75.52	-1.3%	-2.1%	3.5%
Indian Rupee	73.11	0.5%	-0.1%	3.5%
Mexican Peso	20.46	2.2%	-2.6%	14.7%
South African Rand	14.77	2.6%	-0.5%	21.0%

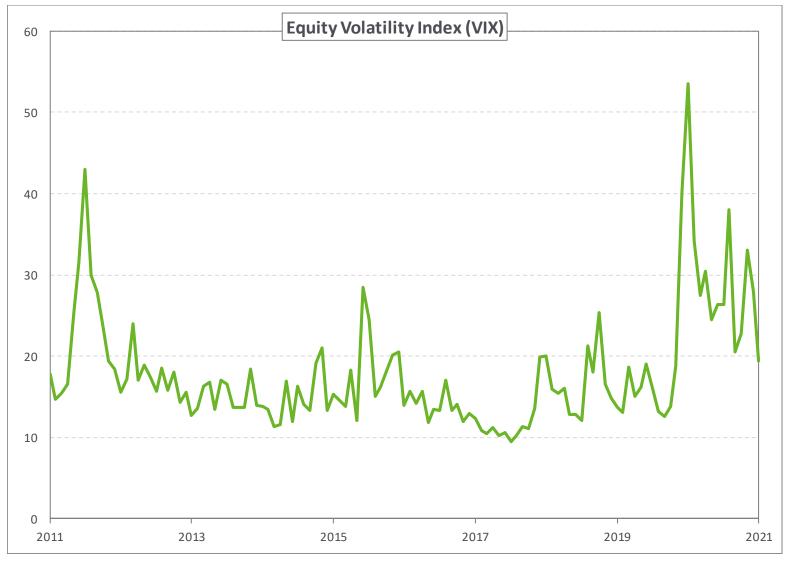
Source: FactSet



Source: FactSet



# **VOLATILITY**



Source: CBOE, FactSet



# EQUITY

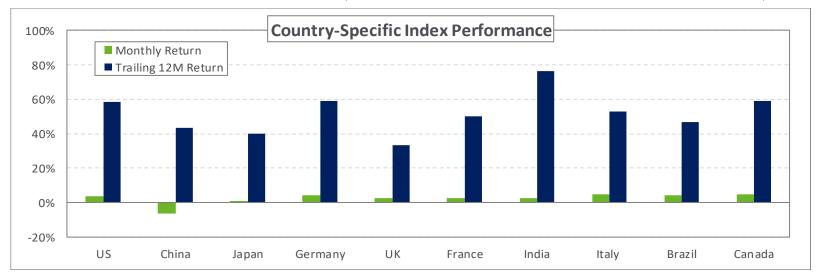
### **EQUITY INDEX PERFORMANCE**





Source: Russell, FactSet

Source: MSCI, FactSet



Source: MSCI, FactSet Represents returns in USD



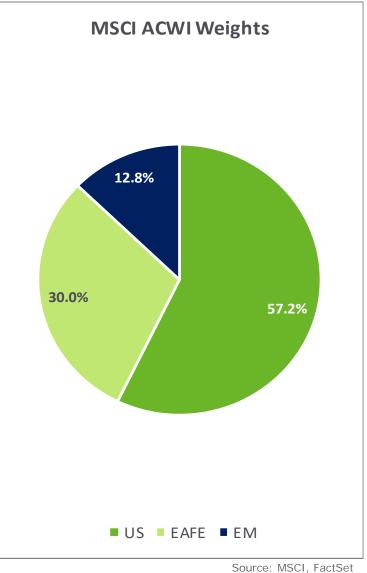
### INDEX COMPOSITION

	MTD	QTD	YTD	Index Weight
S&P 500	4.4%	6.2%	6.2%	100.0%
Communication Services	0.3%	0.9%	0.9%	10.9%
Consumer Discretionary	0.4%	0.4%	0.4%	12.4%
Consumer Staples	0.5%	0.0%	0.0%	6.1%
Energy	0.1%	0.7%	0.7%	2.8%
Financials	0.7%	1.7%	1.7%	11.3%
Health Care	0.5%	0.4%	0.4%	13.0%
Industrials	0.8%	0.9%	0.9%	8.9%
Information Technology	0.4%	0.5%	0.5%	26.6%
Materials	0.2%	0.2%	0.2%	2.7%
Real Estate	0.2%	0.2%	0.2%	2.5%
Utilities	0.3%	0.1%	0.1%	2.7%

Source: S&P, FactSet

	MTD	QTD	YTD	Index Weight
MSCI ACWI	2.7%	4.6%	4.6%	100.0%
Communication Services	0.0%	0.6%	0.6%	9.4%
Consumer Discretionary	0.2%	0.3%	0.3%	12.8%
Consumer Staples	0.4%	-0.1%	-0.1%	7.0%
Energy	0.1%	0.5%	0.5%	3.4%
Financials	0.6%	1.5%	1.5%	14.3%
Health Care	0.3%	0.1%	0.1%	11.4%
Industrials	0.6%	0.7%	0.7%	10.0%
Information Technology	0.1%	0.4%	0.4%	21.3%
Materials	0.2%	0.3%	0.3%	5.0%
Real Estate	0.1%	0.1%	0.1%	2.6%
Utilities	0.2%	0.0%	0.0%	2.9%

Source: MSCI, FactSet

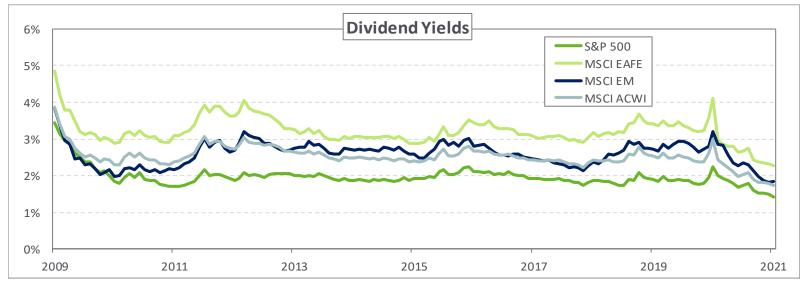




# **EARNINGS & YIELDS**



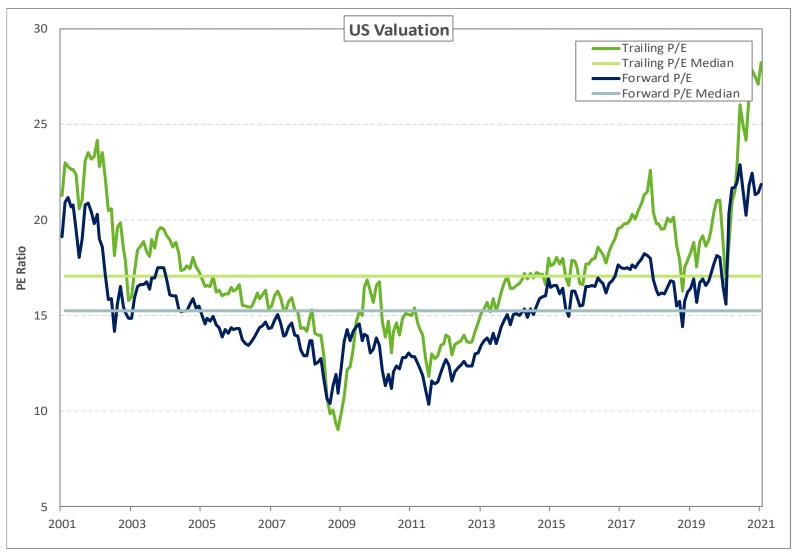
Source: FactSet



Source: FactSet



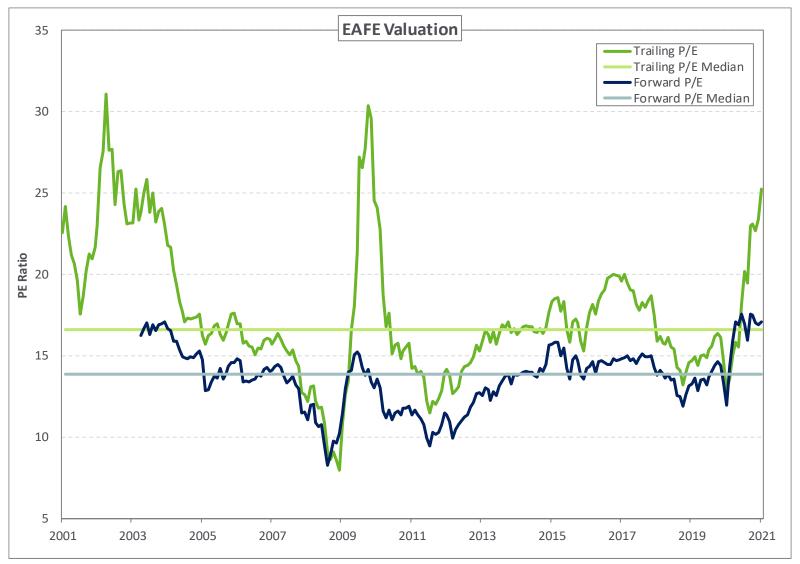
### **US EQUITY VALUATIONS**



Source: S&P, FactSet



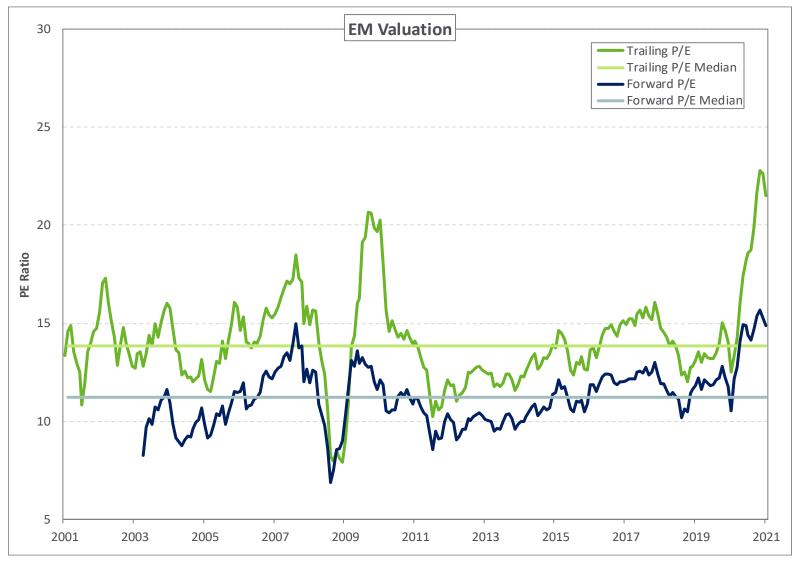
## **EAFE EQUITY VALUATIONS**







## **EM EQUITY VALUATIONS**







# CREDIT

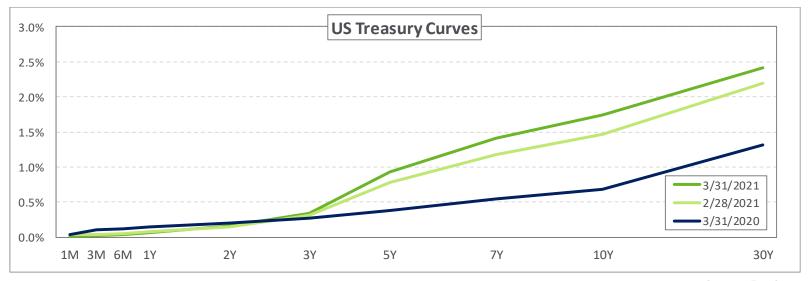
## FIXED INCOME CHARACTERISTICS

	Averages			То	tal Returns (	%)
	Yield to Worst	Spread (bps)	Duration (Years)	1-Month	YTD	1-Year
Barclays Aggregate	1.61%	31	6.4	-1.2%	-3.4%	0.7%
Barclays Treasury	1.00%	-	6.8	-1.5%	-4.3%	-4.4%
Barclays Agency	0.80%	4	3.9	-0.7%	-1.6%	-0.3%
Barclays MBS	1.82%	12	4.1	-0.5%	-1.1%	-0.1%
Barclays ABS	0.56%	35	2.1	-0.2%	-0.2%	4.6%
Barclays CMBS	1.50%	37	5.8	-1.2%	-2.8%	2.3%
Barclays Corp IG	2.28%	91	8.5	-1.7%	-4.6%	8.7%
Barclays Muni	1.18%	-	5.3	0.6%	-0.4%	5.5%
Barclays HY Muni	3.64%	-	7.4	1.1%	2.1%	15.0%
Barclays TIPS	1.11%	-	8.1	-0.2%	-1.5%	7.5%
Barclays HY	4.23%	310	3.9	0.1%	0.8%	23.6%
Barclays Global Agg	1.16%	33	7.4	-1.9%	-4.5%	4.6%
JPM EMBI Glob Div	-	353	7.6	-1.0%	-4.5%	15.9%
JPM GBI - EM	4.71%	-	5.5	-3.1%	-6.7%	13.0%

Source: Barclays, JP Morgan, FactSet



## **TREASURIES**



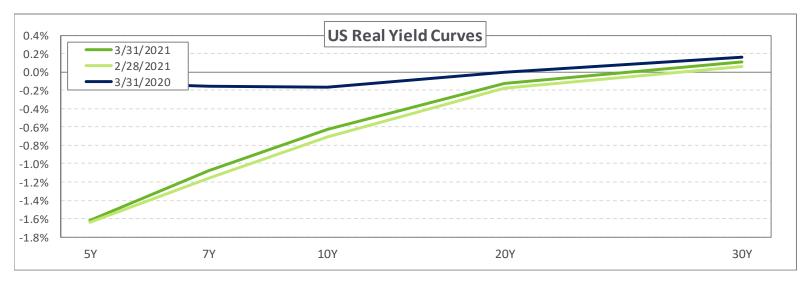
Source: FactSet

		Yield (%)	Total Return (%)		
	Current	1 Month Ago	12 Months Ago	1 Month	12 Months
3M Treasury	0.03%	0.04%	0.10%	0.01%	0.12%
6M Treasury	0.03%	0.06%	0.11%	0.02%	0.16%
2Y Treasury	0.16%	0.14%	0.20%	0.00%	0.19%
5Y Treasury	0.94%	0.78%	0.37%	-0.60%	-1.91%
10Y Treasury	1.74%	1.46%	0.68%	-2.50%	-8.23%
30Y Treasury	2.42%	2.19%	1.32%	-4.97%	-21.04%

Source: FactSet



## **REAL YIELDS**



Source: FactSet

		Real Rates	Breakeven Rates		
	Current	1 Month Ago	12 Months Ago	Current	12 Months
5-Year	-1.62%	-1.64%	-0.12%	2.56%	-0.12%
7-Year	-1.08%	-1.16%	-0.16%	2.49%	-0.16%
10-Year	-0.63%	-0.71%	-0.17%	2.37%	-0.17%
30-Year	0.11%	0.06%	0.16%	2.31%	0.16%

Source: FactSet



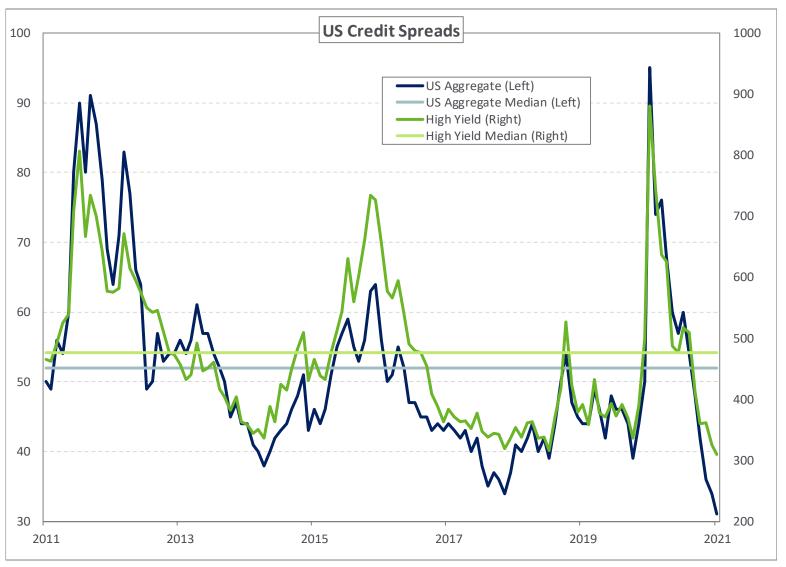
## NOMINAL YIELDS







## **CREDIT SPREADS**



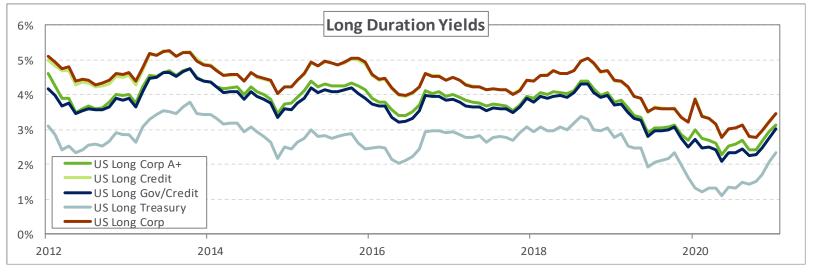
Source: Barclays, FactSet



## LONG DURATION

Index	Current	1 Month Ago	12 Months Ago	Duration	
Barclays Long Treasury	2.3%	2.0%	1.3%	18.6	
Barclays 20+ STRIPS 2.5%		2.2%	1.4%	26.9	
Barclays Long Credit 3.5%		3.2%	3.2% 3.9%		
Barclays Long Gov/Credit 3.0%		2.8%	2.7%	16.2	
Barclays Long Corp A+ 3.2%		3.0%	3.3%	15.5	

Source: Barclays, FactSet



Source: Barclays, FactSet



## **REAL ASSETS**

## REAL ASSETS INDEX PERFORMANCE

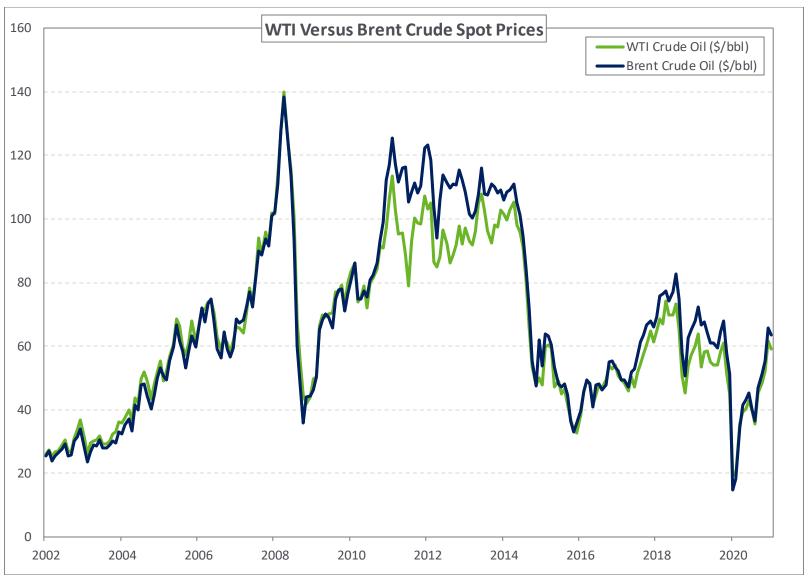
Index	1 Month	3 Month	YTD	1 Year	3 Year	5 Year
Bloomberg Commodity Index	-2.1%	6.9%	6.9%	34.9%	-0.2%	2.3%
Bloomberg Sub Agriculture Index	-1.8%	6.8%	6.8%	37.8%	3.0%	0.4%
Coffee	-10.2%	-5.3%	-5.3%	-5.3%	-8.5%	-9.9%
Corn	3.1%	16.9%	16.9%	51.4%	3.2%	-0.4%
Cotton	-8.9%	1.9%	1.9%	52.0%	-1.8%	5.7%
Soybean	2.3%	9.7%	9.7%	57.7%	5.7%	5.0%
Soybean Oil	6.0%	26.7%	26.7%	90.4%	14.1%	5.1%
Sugar	-10.2%	-0.2%	-0.2%	37.9%	0.4%	-5.5%
Wheat	-6.4%	-4.2%	-4.2%	3.5%	5.0%	-4.5%
Bloomberg Sub Energy	-3.6%	17.3%	17.3%	37.3%	-13.6%	-4.2%
Brent Crude	-1.3%	23.3%	23.3%	92.4%	-2.6%	6.9%
Heating Oil	-3.5%	20.1%	20.1%	48.2%	-7.9%	3.5%
Natural Gas	-7.2%	3.0%	3.0%	-17.5%	-26.1%	-19.5%
Unleaded Gas	0.9%	29.0%	29.0%	178.3%	-2.9%	2.7%
WTI Crude Oil	-3.4%	22.5%	22.5%	80.0%	-15.9%	-3.9%
Bloomberg Sub Industrial Metals	-2.4%	7.5%	7.5%	53.1%	4.7%	10.3%
Aluminum	2.2%	10.6%	10.6%	38.0%	1.4%	5.8%
Copper	-2.4%	13.5%	13.5%	75.4%	8.9%	11.6%
Nickel	-13.6%	-3.5%	-3.5%	37.7%	6.2%	12.8%
Zinc	0.7%	1.8%	1.8%	44.0%	-1.8%	11.2%
Bloomberg Sub Precious Metals	-2.4%	-9.3%	-9.3%	15.2%	8.5%	6.0%
Gold	-0.9%	-9.8%	-9.8%	4.4%	7.4%	5.5%
Silver	-7.2%	-7.2%	-7.2%	67.3%	12.5%	7.8%
Bloomberg Sub Livestock	5.3%	10.4%	10.4%	17.6%	-4.6%	-4.9%
Lean Hogs	10.4%	27.5%	27.5%	37.9%	-11.0%	-10.2%
Live Cattle	2.4%	2.3%	2.3%	8.4%	-0.9%	-2.0%

Source: Bloomberg, FactSet

Bloomberg subindex total return indices reflects the return of the underlying one month commodity futures price movements



### **OIL MARKETS**







**Alpha** - Measures the relationship between the fund performance and the performance of another fund or benchmark index and equals the excess return while the other fund or benchmark index is zero.

**Alpha Jensen -** The average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. Also known as the abnormal return or the risk adjusted excess return.

**Annualized Excess Return over Benchmark** - Annualized fund return minus the annualized benchmark return for the calculated return.

**Annualized Return** - A statistical technique whereby returns covering periods greater than one year are converted to cover a 12 month time span.

**Beta** - Measures the volatility or systematic risk and is equal to the change in the fund's performance in relation to the change in the assigned index's performance.

**Information Ratio** - A measure of the risk adjusted return of a financial security, asset, or portfolio.

Formula: (Annualized Return of Portfolio - Annualized Return of Benchmark)/Annualized Standard Deviation(Period Portfolio Return - Period Benchmark Return). To annualize standard deviation, multiply the deviation by the square root of the number of periods per year where monthly returns per year equals 12 and quarterly returns is four periods per year.

**R-Squared** – Represents the percentage of a fund's movements that can be explained by movements in an index. R-Squared values range from 0 to 100. An R-Squared of 100 denotes that all movements of a fund are completely explained by movements in the index.

**Sharpe Ratio** - A measure of the excess return or risk premium per unit of risk in an investment asset or trading strategy.

**Sortino Ratio** - A method to differentiate between good and bad volatility in the Sharpe Ratio. The differentiation of up and down volatility allows the calculation to provide a risk adjusted measure of a security or fund's performance without upward price change penalties.

Formula: Calculation Average (X-Y)/Downside Deviation (X-Y) \* 2 Where X=Return Series X Y = Return Series Y which is the risk free return (91 day T-bills)

**Standard Deviation** - The standard deviation is a statistical term that de-scribes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

Formula: (Annualized Return of Portfolio – Annualized Return of Risk Free) / Annualized Standard Deviation (Portfolio Returns)

**Tracking Error** - Tracking error, also known as residual risk, is a measure of the degree to which a portfolio tracks its benchmark. It is also a measure of consistency of excess returns. Tracking error is computed as the annualized standard deviation of the difference between a portfolio's return and that of its benchmark.

Formula: Tracking Error = Standard Deviation  $(X-Y) * \sqrt{(\# of periods per year)}$ Where X = periods portfolio return and Y = the period's benchmark return For monthly returns, the periods per year = 12 For quarterly returns, the periods per year = 4

**Treynor Ratio** - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

Formula: (Portfolio Average Return - Average Return of Risk-Free Rate)/Portfolio Reta

**Up/Down Capture Ratio** - A measure of what percentage of a market's re-turns is "captured" by a portfolio. For example, if the market declines 10% over some period, and the manager declines only 9%, then his or her capture ratio is 90%. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

 $\label{eq:UpsideCapture} UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) \ when \ Period \\ Benchmark \ Return \ is \ > \ = \ 0$ 

 $\label{eq:upsideCapture} UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) \ when \ Period \ Benchmark \ Return \ is > = 0$ 



# 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 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.

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



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



**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 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 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.** <sup>4</sup> - 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



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