

QUARTERLY PERFORMANCE REPORT

SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

March 31, 2021

Allan Martin, Partner

Sam Austin, Partner

Michael Malchenko, Sr Client Specialist



San Bernardino County Employees'
Retirement Association



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

MARKET ENVIRONMENT UPDATE & OUTLOOK

NEPC, LLC

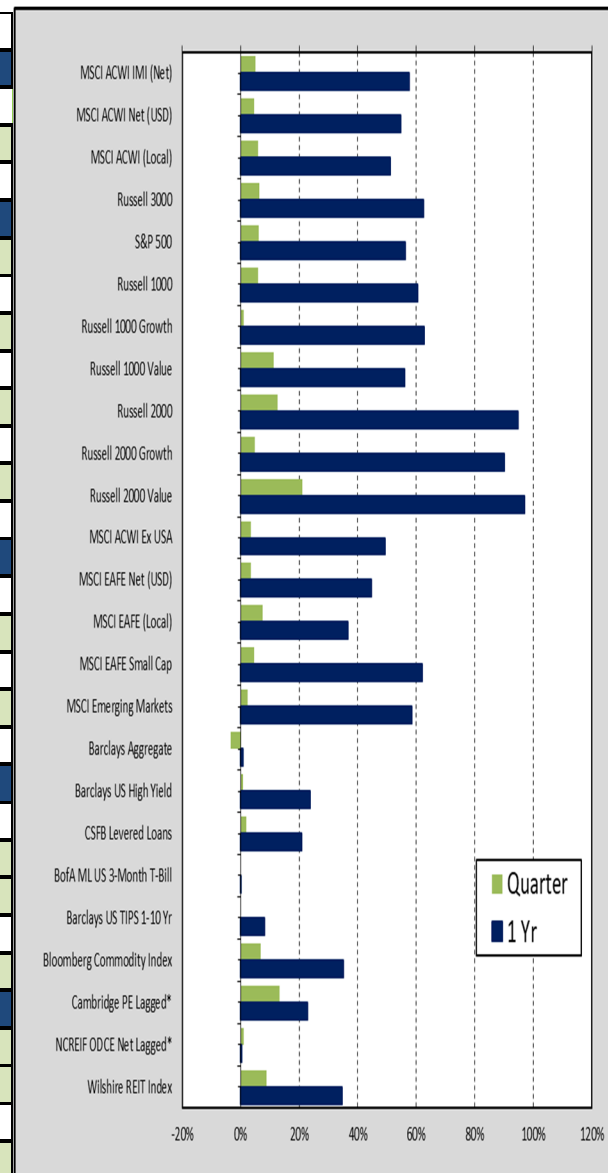
ECONOMIC ENVIRONMENT

- **Q4 Real GDP (third estimate) grew at a rate of +4.3%. In the third quarter, real GDP grew at an annual rate of +33.4%.**
 - 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



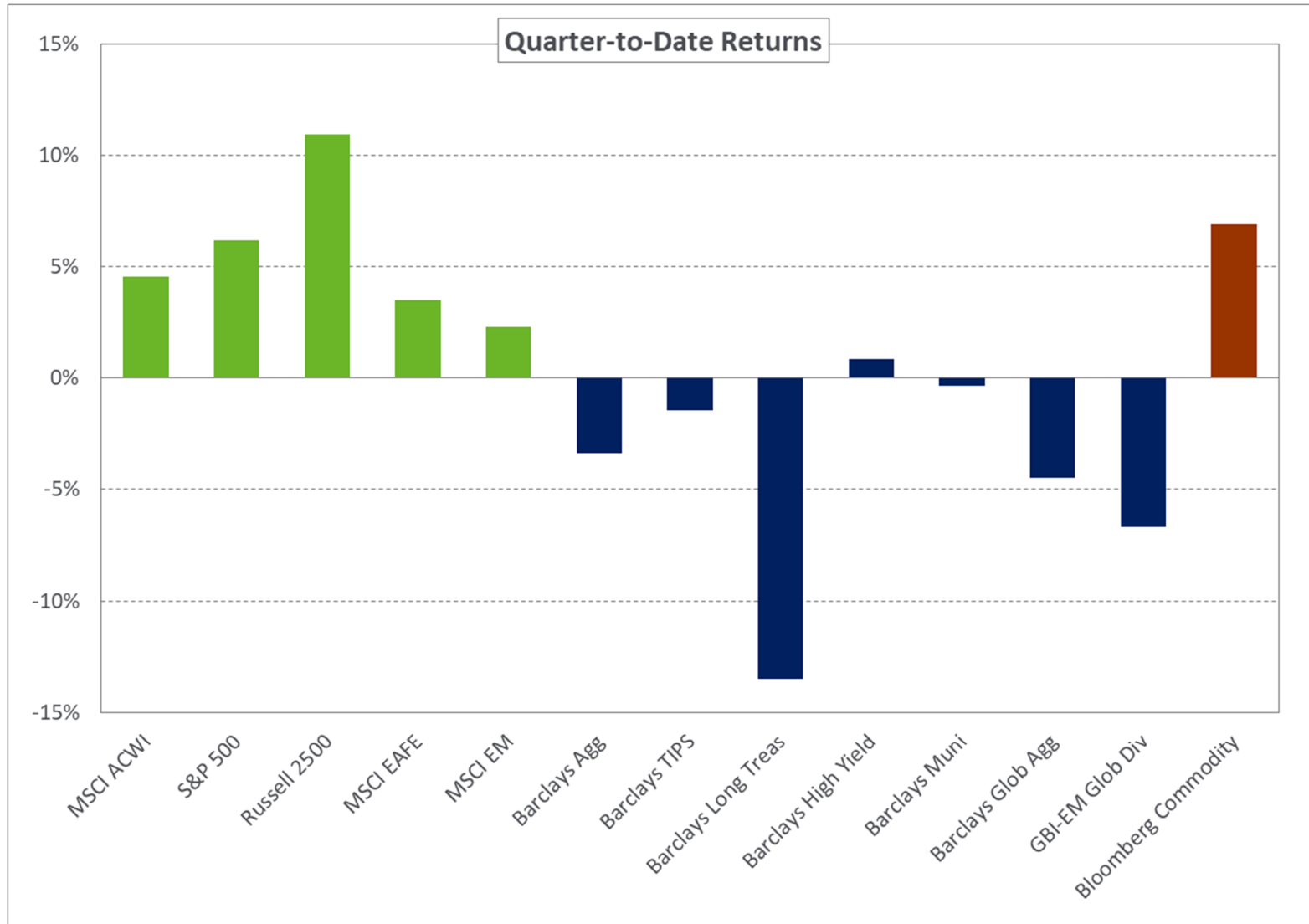
MARKET ENVIRONMENT – Q1 2021 OVERVIEW

| | | Qtr. | 1 Yr. | 3 Yr. | 5 Yr. | 10 Yr. |
|---|----------------------------------|--------|--------|--------|--------|--------|
| 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% |
| BofA ML 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

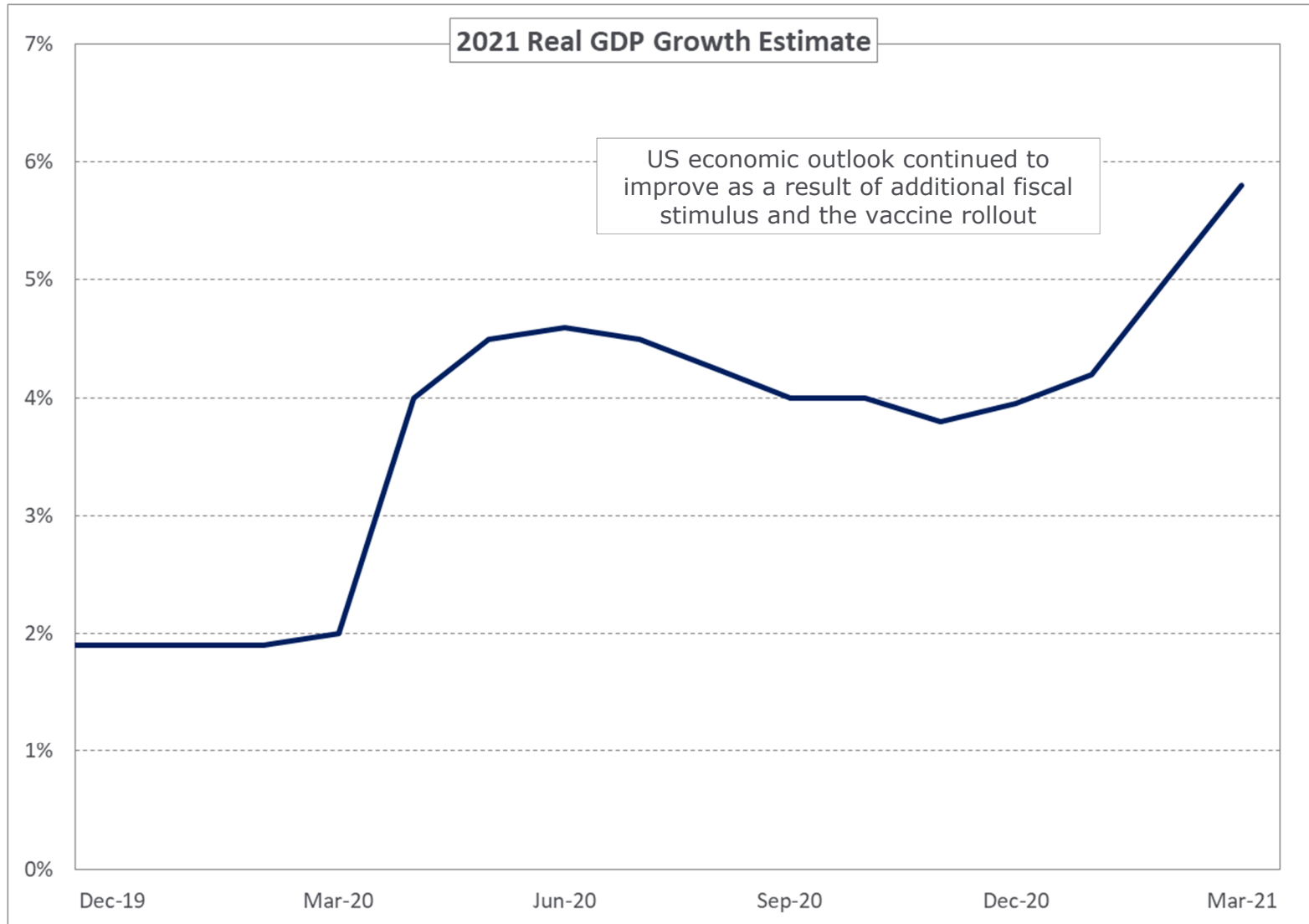
FIXED INCOME UNDERPERFORMED



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



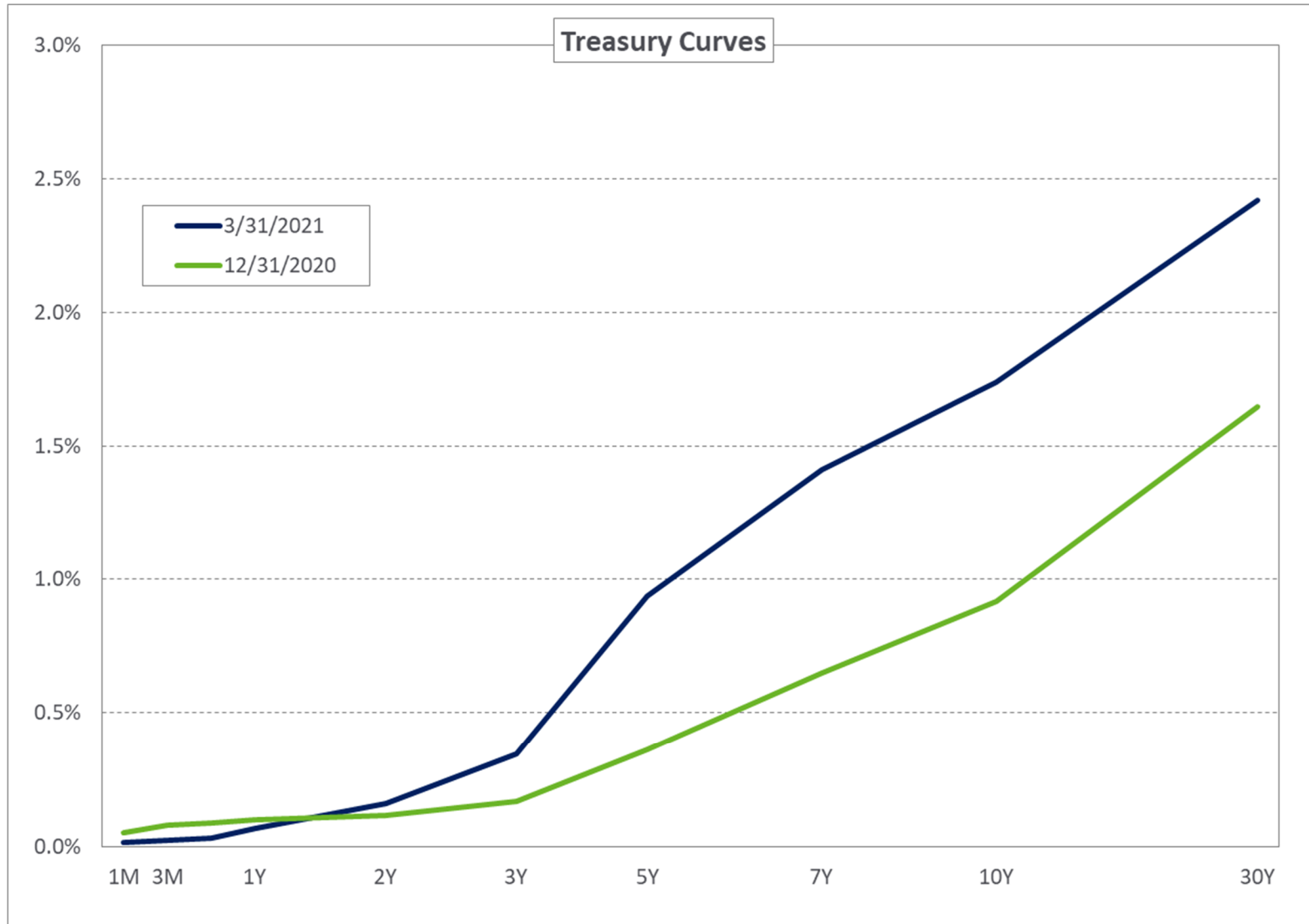
THE U.S. ECONOMIC OUTLOOK IMPROVED



Source: FactSet



LONG-TERM INTEREST RATES ROSE



Source: FactSet



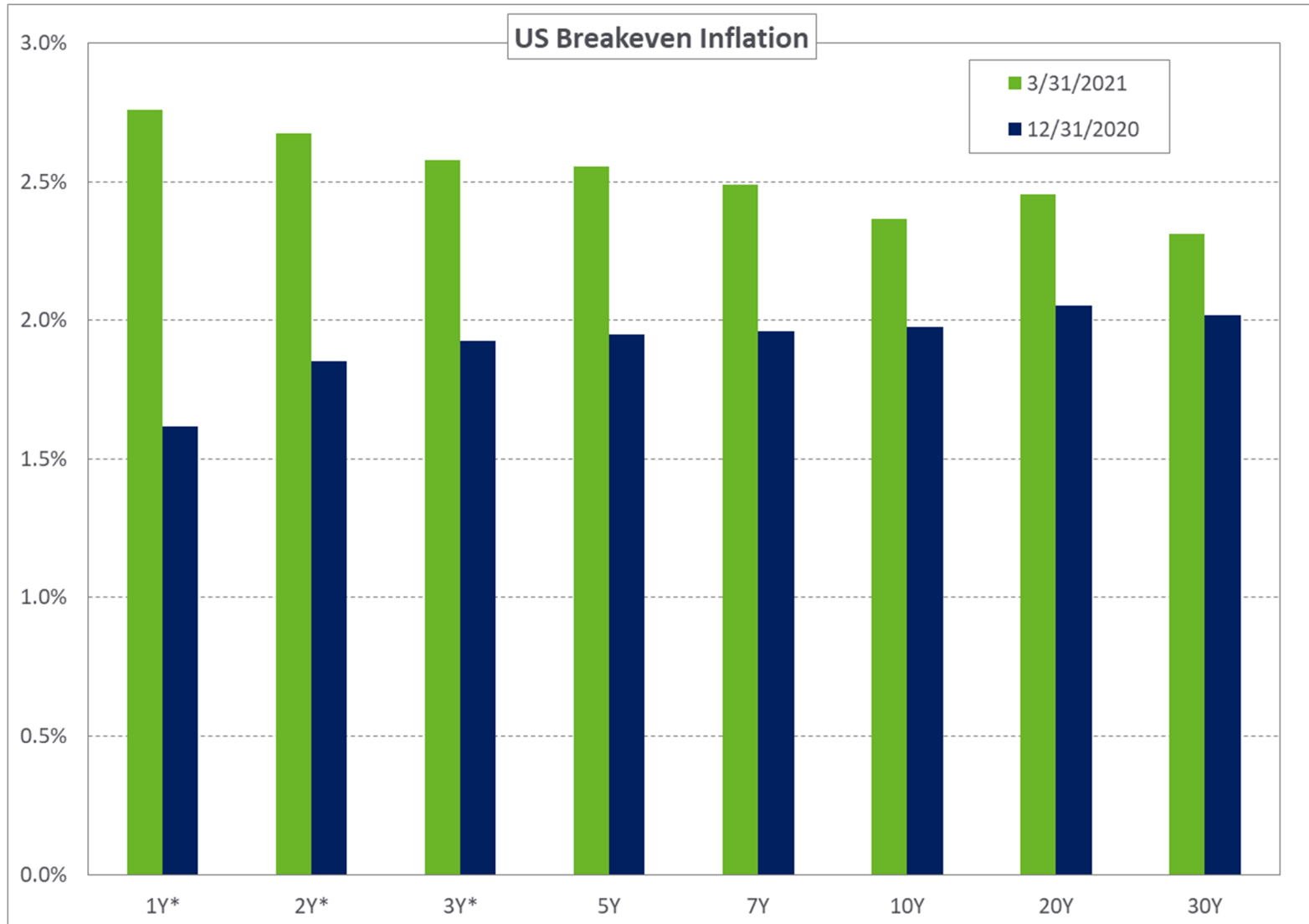
THE U.S. YIELD CURVE STEEPENED



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



NEAR-TERM INFLATION EXPECTATIONS ROSE

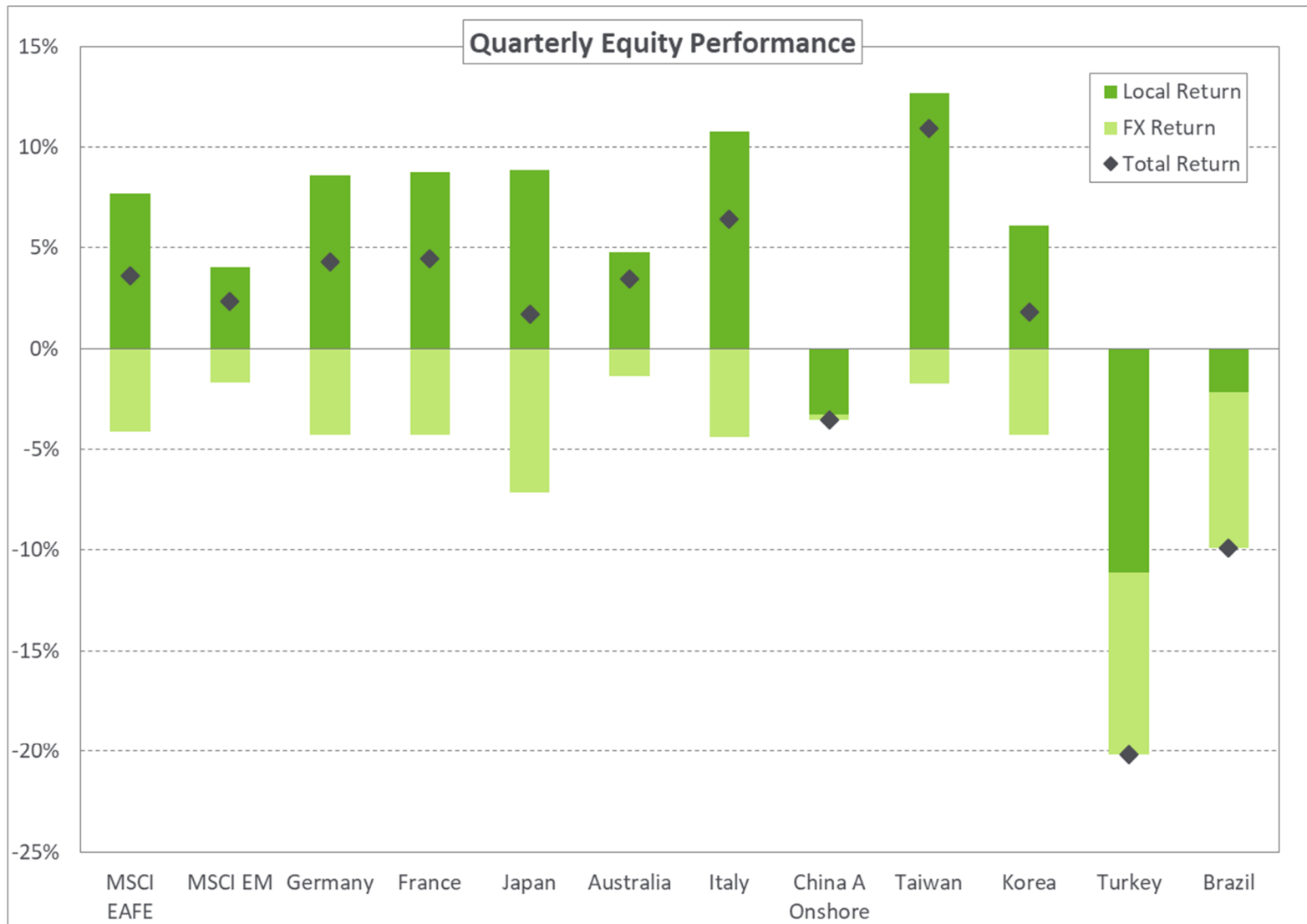


Source: NEPC, Bloomberg, FactSet

*Real yields are calculated based on a weighted average of select off-the-run TIPS yields



USD STRENGTH WEIGHED ON NON-US EQUITIES



Source: MSCI, FactSet



ASSESSING THE KEY MARKET THEMES

AS OF 03/31/21

| | | | | | |
|---|---------|-------|----------------|------------------|-----------------|
| <p>Virus Trajectory <i>No Change in Status</i></p> | Dormant | Faded | Neutral | Prevalent | Dominant |
| <ul style="list-style-type: none"> • Virus Trajectory continues to be an influential force driving global economic outcomes • Market sentiment in the US has improved with a significant increase in vaccinations, but concerns remain outside the US regarding distribution, logistics, and access to vaccines • COVID-19 cases remain elevated and new virus strains may impact the timing of an economic recovery | | | | | |
| <p>Permanent Interventions <i>No Change in Status</i></p> | Dormant | Faded | Neutral | Prevalent | Dominant |
| <ul style="list-style-type: none"> • Permanent Interventions is the dominant force driving global markets upward • Additional fiscal stimulus in the US remains an option with discussion of a new infrastructure package • Central banks have pledged to hold interest rates near zero, while quantitative easing programs continue to purchase significant volumes of government bonds across the developed world | | | | | |
| <p>Globalization Backlash <i>No Change in Status</i></p> | Dormant | Faded | Neutral | Prevalent | Dominant |
| <ul style="list-style-type: none"> • The importance of the theme may increase in coming years as the lasting impact from the pandemic is seen • The world will likely be faced with an amplified wealth divide given economic and labor market disruptions, which historically has driven more volatile political outcomes | | | | | |
| <p>China Transitions <i>No Change in Status</i></p> | Dormant | Faded | Neutral | Prevalent | Dominant |
| <ul style="list-style-type: none"> • US-China tensions remain as the Biden administration has yet to show a willingness to ease trade and economic policy restrictions • However, President Biden has promised a policy review in 2021 regarding the US policy posture with China related to climate change, human rights, and trade issues | | | | | |



TOTAL FUND PERFORMANCE

NEPC, LLC

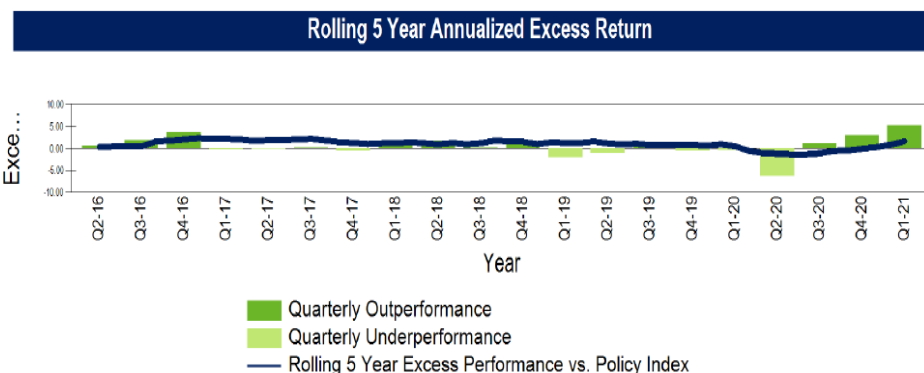
TOTAL FUND PERFORMANCE SUMMARY (NET OF FEES)

| | Market Value | 3 Mo | Rank | Fiscal YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 10 Yrs | Rank |
|--|-------------------------|-------------|----------|--------------|----------|--------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| Total Fund | \$12,639,321,437 | 5.9% | 1 | 24.7% | 3 | 29.7% | 78 | 8.8% | 63 | 9.9% | 46 | 7.9% | 46 |
| <i>Policy Index</i> | | 0.8% | 99 | 14.6% | 99 | 26.4% | 92 | 8.1% | 81 | 8.3% | 92 | 6.9% | 86 |
| <i>S&P 500</i> | | 6.2% | 1 | 29.7% | 1 | 56.4% | 1 | 16.8% | 1 | 16.3% | 1 | 13.9% | 1 |
| <i>BBgBarc US Aggregate TR</i> | | -3.4% | 99 | -2.1% | 99 | 0.7% | 99 | 4.7% | 99 | 3.1% | 99 | 3.4% | 99 |
| <i>60% MSCI ACWI (Net) / 40% FTSE WGBI</i> | | 0.4% | 99 | 17.1% | 95 | 31.3% | 62 | 8.4% | 71 | 8.9% | 78 | 6.3% | 92 |
| <i>InvMetrics Public DB > \$1B Net Median</i> | | 3.3% | | 19.8% | | 33.0% | | 8.9% | | 9.8% | | 7.8% | |

In the year ended March 31, 2021 the Fund return of 29.7% ranked in the 78th percentile of Public Funds > \$1 Billion. The Fund's assets totaled \$12.64 billion, up from \$9.78 billion one year ago.

In the three-year period ended March 31, 2021 the Fund return of 8.8% ranked in the 63rd percentile among its peers. The Sharpe Ratio over this period of 0.9 ranks in the 12th percentile.

In the five-year period ended March 31, 2021 the Fund return of 9.9% ranked in the 46th percentile among its peers. On a risk adjusted basis the Fund's Sharpe Ratio ranked in the 1st percentile in its peer group while the Sortino Ratio ranked in the 19th percentile.



| 3 Years Ending March 31, 2021 | | | | | | |
|--|--------------------------|-------------------------------|--------------|-------------------|---------------|--------------------|
| | Anlzd Standard Deviation | Anlzd Standard Deviation Rank | Sharpe Ratio | Sharpe Ratio Rank | Sortino Ratio | Sortino Ratio Rank |
| Total Fund | 8.3% | 3 | 0.9 | 12 | 1.0 | 26 |
| InvMetrics Public DB > \$1B Net Median | 11.0% | -- | 0.7 | -- | 0.9 | -- |

| 5 Years Ending March 31, 2021 | | | | | | |
|--|--------------------------|-------------------------------|--------------|-------------------|---------------|--------------------|
| | Anlzd Standard Deviation | Anlzd Standard Deviation Rank | Sharpe Ratio | Sharpe Ratio Rank | Sortino Ratio | Sortino Ratio Rank |
| Total Fund | 6.6% | 1 | 1.3 | 1 | 1.3 | 19 |
| InvMetrics Public DB > \$1B Net Median | 8.9% | -- | 1.0 | -- | 1.1 | -- |

Note: InvestMetrics Public Funds >\$1B Net of Fee universe contains 38 portfolios.



San Bernardino County Employees' Retirement Association

TOTAL FUND PERFORMANCE SUMMARY

1 Year Ending March 31, 2021

| | Anlzd Return | Anlzd Return Rank | Anlzd Standard Deviation | Anlzd Standard Deviation Rank | Sharpe Ratio | Sharpe Ratio Rank | Sortino Ratio | Sortino Ratio Rank |
|--|--------------|-------------------|--------------------------|-------------------------------|--------------|-------------------|---------------|--------------------|
| Total Fund | 29.7% | 78 | 7.7% | 24 | 3.8 | 47 | 23.0 | 27 |
| InvMetrics Public DB > \$1B Net Median | 33.0% | -- | 8.8% | -- | 3.8 | -- | 17.7 | -- |

3 Years Ending March 31, 2021

| | Anlzd Return | Anlzd Return Rank | Anlzd Standard Deviation | Anlzd Standard Deviation Rank | Sharpe Ratio | Sharpe Ratio Rank | Sortino Ratio | Sortino Ratio Rank |
|--|--------------|-------------------|--------------------------|-------------------------------|--------------|-------------------|---------------|--------------------|
| Total Fund | 8.8% | 63 | 8.3% | 3 | 0.9 | 12 | 1.0 | 26 |
| InvMetrics Public DB > \$1B Net Median | 8.9% | -- | 11.0% | -- | 0.7 | -- | 0.9 | -- |

5 Years Ending March 31, 2021

| | Anlzd Return | Anlzd Return Rank | Anlzd Standard Deviation | Anlzd Standard Deviation Rank | Sharpe Ratio | Sharpe Ratio Rank | Sortino Ratio | Sortino Ratio Rank |
|--|--------------|-------------------|--------------------------|-------------------------------|--------------|-------------------|---------------|--------------------|
| Total Fund | 9.9% | 46 | 6.6% | 1 | 1.3 | 1 | 1.3 | 19 |
| InvMetrics Public DB > \$1B Net Median | 9.8% | -- | 8.9% | -- | 1.0 | -- | 1.1 | -- |

10 Years Ending March 31, 2021

| | Anlzd Return | Anlzd Return Rank | Anlzd Standard Deviation | Anlzd Standard Deviation Rank | Sharpe Ratio | Sharpe Ratio Rank | Sortino Ratio | Sortino Ratio Rank |
|--|--------------|-------------------|--------------------------|-------------------------------|--------------|-------------------|---------------|--------------------|
| Total Fund | 7.9% | 46 | 5.7% | 1 | 1.3 | 1 | 1.4 | 11 |
| InvMetrics Public DB > \$1B Net Median | 7.8% | -- | 8.3% | -- | 0.9 | -- | 1.1 | -- |

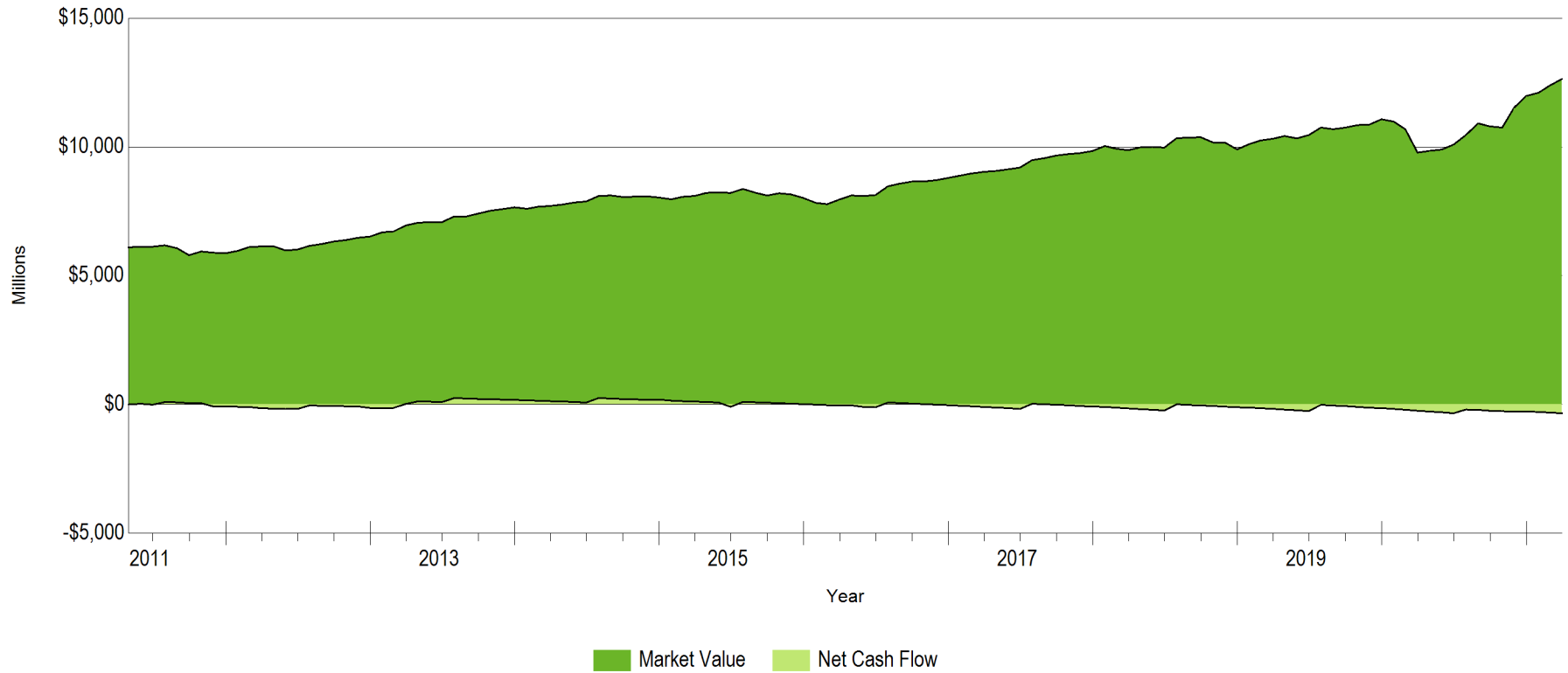
Sortino Ratio requires at least two negative points during the time period in order to calculate



San Bernardino County Employees' Retirement Association

TOTAL FUND ASSET GROWTH SUMMARY

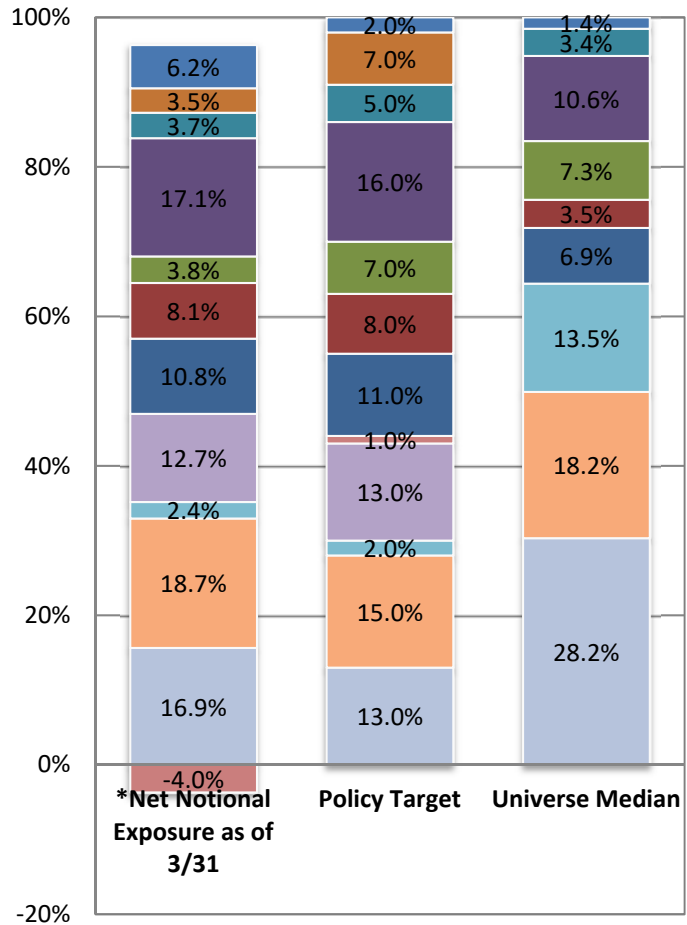
10 Years Ending March 31, 2021



| | Last Three Months | Fiscal Year-To-Date | One Year | Five Years | Ten Years |
|------------------------|-------------------|---------------------|------------------|------------------|------------------|
| Beginning Market Value | \$11,978,863,182 | \$10,087,404,958 | \$9,778,845,943 | \$7,956,959,630 | \$5,956,547,092 |
| Net Cash Flow | -\$66,593,548 | \$1,699,735 | -\$96,423,066 | -\$297,187,446 | -\$331,476,601 |
| Net Investment Change | \$727,051,803 | \$2,550,216,744 | \$2,956,898,560 | \$4,979,549,253 | \$7,014,250,946 |
| Ending Market Value | \$12,639,321,437 | \$12,639,321,437 | \$12,639,321,437 | \$12,639,321,437 | \$12,639,321,437 |



ASSET ALLOCATION COMPLIANCE



- US Equities
- Int'l Equities
- U.S. Core
- US Credit
- Non-US Core Fixed Income
- Non-US Credit
- Emerging Market Debt
- Real Estate
- Private Equity
- Real Assets
- Absolute Return
- Cash

| | *Net Notional Exposure | *Net Notional Exposure as of 03/31 | Policy Target | *Difference | Policy Ranges | Within Range |
|--------------------------|------------------------|------------------------------------|---------------|-------------|---------------|--------------|
| US Equities | 2,133,770 | 16.9% | 13.0% | 3.9% | 8% -18% | Yes |
| Int'l Equities | 2,365,254 | 18.7% | 15.0% | 3.7% | 10% -20% | Yes |
| U.S. Core Fixed Income | 301,300 | 2.4% | 2.0% | 0.4% | -3% -7% | Yes |
| US Credit | 1,610,313 | 12.7% | 13.0% | -0.3% | 8% -18% | Yes |
| Non-US Core Fixed Income | (505,573) | -4.0% | 1.0% | -5.0% | -4% -6% | Yes |
| Non-US Credit | 1,370,933 | 10.8% | 11.0% | -0.2% | 6% -16% | Yes |
| Emerging Market Debt | 1,019,021 | 8.1% | 8.0% | 0.1% | 3% -13% | Yes |
| Real Estate | 484,111 | 3.8% | 7.0% | -3.2% | 0% -14% | Yes |
| Private Equity | 2,159,078 | 17.1% | 16.0% | 1.1% | 6% -21% | Yes |
| Real Assets | 466,660 | 3.7% | 5.0% | -1.3% | 0% -10% | Yes |
| Absolute Return | 447,586 | 3.5% | 7.0% | -3.5% | 0% -12% | Yes |
| Cash | 786,868 | 6.2% | 2.0% | 4.2% | 0% -10% | Yes |
| | 12,639,321 | 100.0% | 100.0% | | | |



OVERLAY INVESTMENT EXPOSURE SUMMARY

SBCERA – Delta adjusted asset summary as of March 31, 2021

| <u>Asset Class</u> | <u>Physical Exposure</u> | | <u>Delta Adjusted Synthetic Exposure</u> | | <u>Net Position</u> | | <u>Overlay Target</u> | | <u>Policy Target</u> | |
|---------------------------|--------------------------|--------|--|---------|---------------------|--------|-----------------------|--------|----------------------|---------|
| | | | | | | | | | | |
| Total Market Value | 12,557.5 | 100.0% | -0.0 | 0.0% | 12,557.5 | 100.0% | 12,557.5 | 100.0% | 12,557.5 | 100.00% |
| Cash | 2,496.1 | 19.88% | -2,201.0 | -17.53% | 295.2 | 2.35% | 0.0 | 0.0% | 0.0 | 0.00% |
| Cash | 2,496.1 | 19.88% | -2,201.0 | -17.53% | 295.2 | 2.35% | 0.0 | 0.0% | 0.0 | 0.00% |
| Equity | 2,066.7 | 16.46% | 2,465.5 | 19.63% | 4,532.3 | 36.09% | 4,858.4 | 38.69% | 4,771.9 | 38.00% |
| Emerging Markets | 549.4 | 4.38% | 355.6 | 2.83% | 905.0 | 7.21% | 1,022.8 | 8.15% | 1,004.6 | 8.00% |
| Equity Delta Hedge | 0.0 | 0.0% | 0.0 | 0.0% | 0.0 | 0.0% | 0.0 | 0.0% | 0.0 | 0.00% |
| International Developed | 206.9 | 1.65% | 1,268.0 | 10.1% | 1,474.9 | 11.75% | 1,534.2 | 12.22% | 1,506.9 | 12.00% |
| US Large Cap | 1,310.1 | 10.43% | 349.4 | 2.78% | 1,659.6 | 13.22% | 1,853.9 | 14.76% | 1,820.8 | 14.50% |
| US Small Cap | 0.2 | 0.0% | 492.5 | 3.92% | 492.8 | 3.92% | 447.5 | 3.56% | 439.5 | 3.50% |
| Fixed | 4,124.7 | 32.85% | -264.6 | -2.11% | 3,860.1 | 30.74% | 3,829.2 | 30.49% | 3,761.0 | 29.95% |
| EM High Yield CDX | 0.0 | 0.0% | 0.0 | 0.0% | 0.0 | 0.0% | 0.0 | 0.0% | 0.0 | 0.00% |
| Global ex US Fixed Income | 2,477.3 | 19.73% | -565.8 | -4.51% | 1,911.4 | 15.22% | 1,943.4 | 15.48% | 1,908.7 | 15.20% |
| High Yield | 1,250.8 | 9.96% | 0.0 | 0.0% | 1,250.8 | 9.96% | 1,214.6 | 9.67% | 1,193.0 | 9.50% |
| US Fixed Income | 396.6 | 3.16% | 301.3 | 2.4% | 697.9 | 5.56% | 671.2 | 5.35% | 659.3 | 5.25% |
| Other | 3,869.9 | 30.82% | 0.0 | 0.0% | 3,869.9 | 30.82% | 3,869.9 | 30.82% | 4,024.7 | 32.05% |
| Alternatives | 32.7 | 0.26% | 0.0 | 0.0% | 32.7 | 0.26% | 32.7 | 0.26% | 37.7 | 0.30% |
| Commodities | 308.4 | 2.46% | 0.0 | 0.0% | 308.4 | 2.46% | 308.4 | 2.46% | 313.9 | 2.50% |
| Infrastructure | 128.1 | 1.02% | 0.0 | 0.0% | 128.1 | 1.02% | 128.1 | 1.02% | 113.0 | 0.90% |
| Private Equity | 2,022.8 | 16.11% | 0.0 | 0.0% | 2,022.8 | 16.11% | 2,022.8 | 16.11% | 2,097.1 | 16.70% |
| Real Estate | 521.6 | 4.15% | 0.0 | 0.0% | 521.6 | 4.15% | 521.6 | 4.15% | 602.8 | 4.80% |
| Tactical Cash | 856.4 | 6.82% | 0.0 | 0.0% | 856.4 | 6.82% | 856.4 | 6.82% | 860.2 | 6.85% |

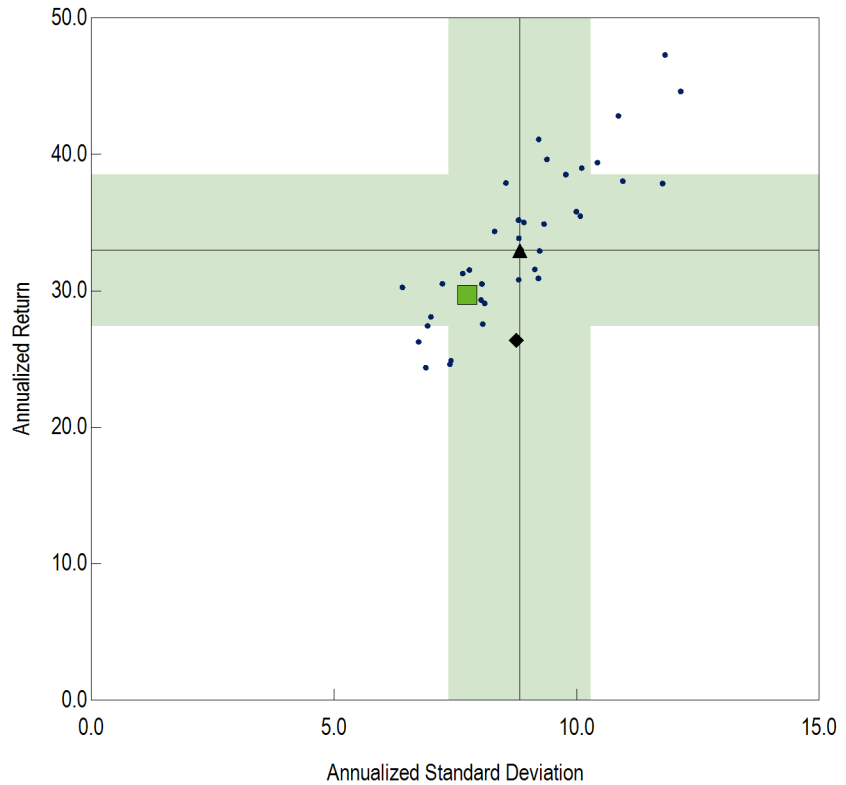
Source: Russell Investments



San Bernardino County Employees' Retirement Association

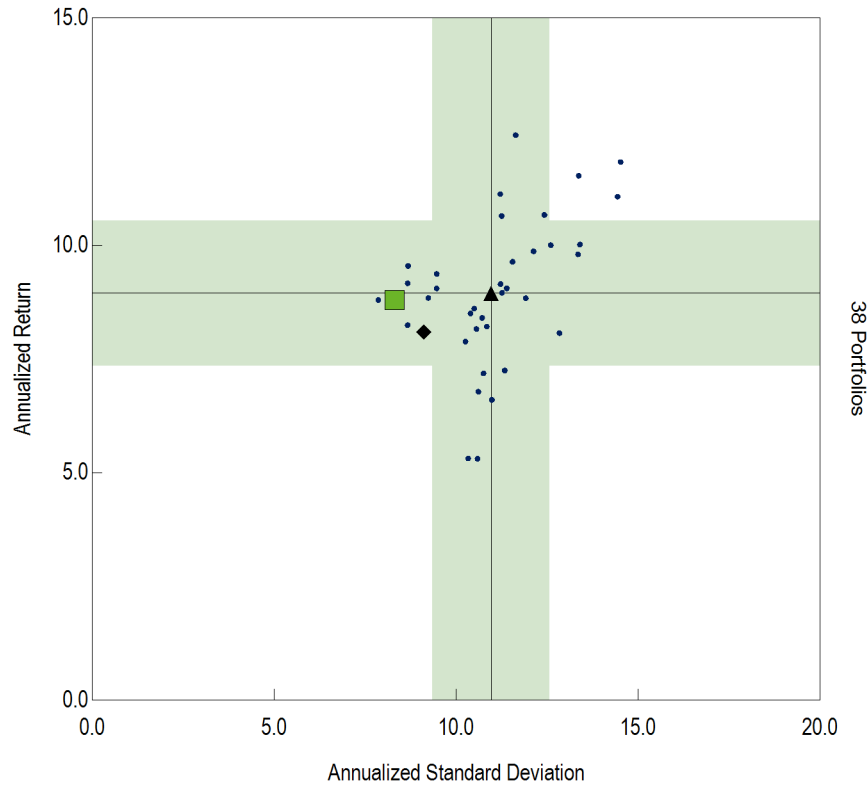
TOTAL FUND RISK/RETURN

1 Year Ending March 31, 2021



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net

3 Years Ending March 31, 2021



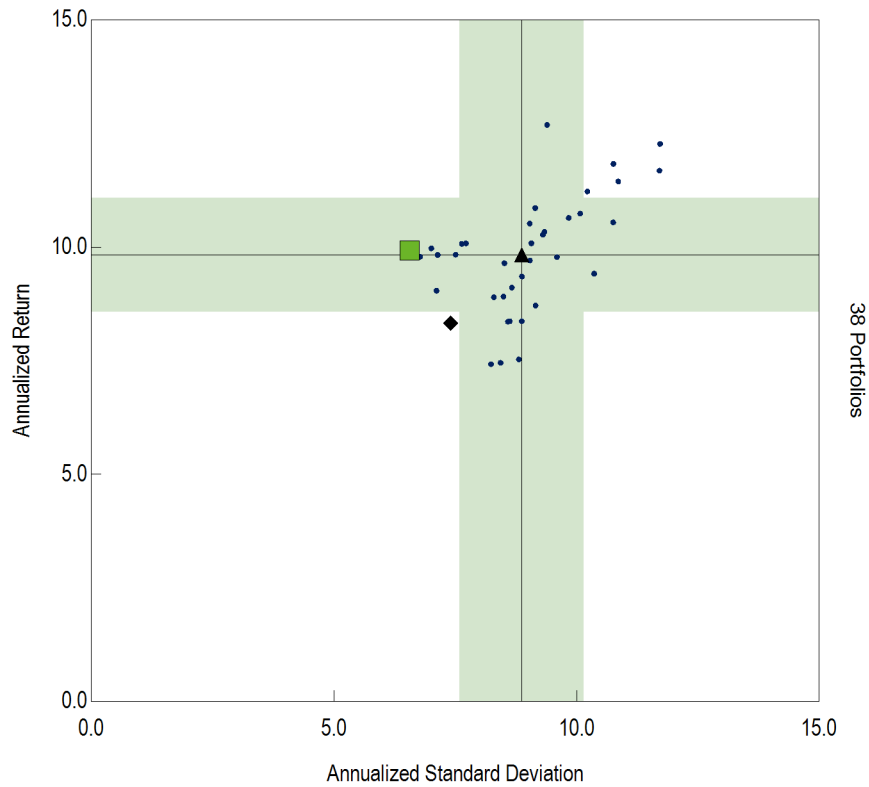
- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net



San Bernardino County Employees' Retirement Association

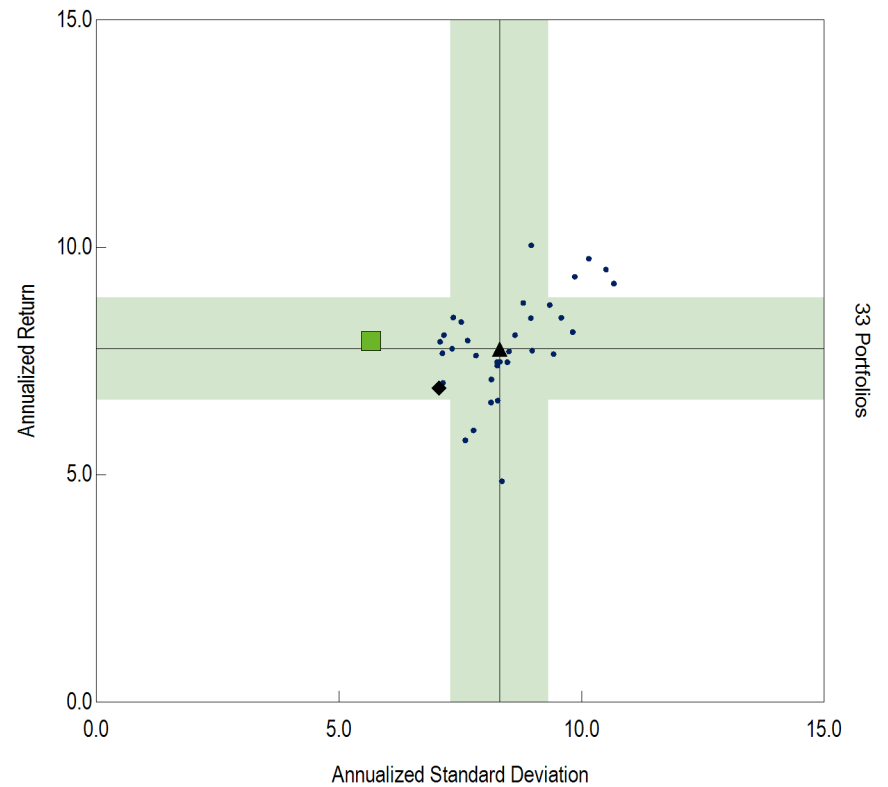
TOTAL FUND RISK/RETURN

5 Years Ending March 31, 2021



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net

10 Years Ending March 31, 2021



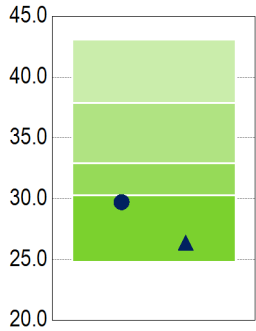
- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

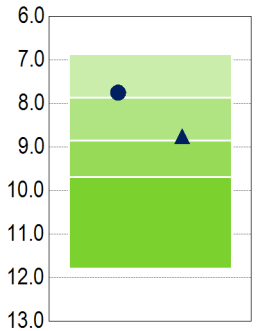
Total Fund vs. InvMetrics Public DB > \$1B Net (USD)
1 Year

Anlzd Return



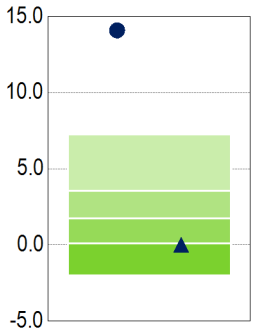
| | |
|----------------|------|
| ● Total Fund | |
| Value | 29.7 |
| Rank | 78 |
| ▲ Policy Index | |
| Value | 26.4 |
| Rank | 92 |
| Universe | |
| 5th %tile | 43.1 |
| 25th %tile | 37.9 |
| Median | 33.0 |
| 75th %tile | 30.3 |
| 95th %tile | 24.8 |

Anlzd Standard Deviation



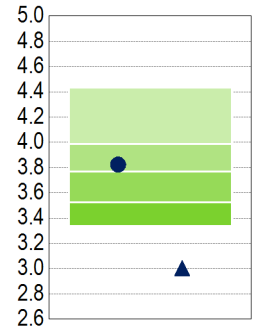
| | |
|----------------|------|
| ● Total Fund | |
| Value | 7.7 |
| Rank | 24 |
| ▲ Policy Index | |
| Value | 8.8 |
| Rank | 43 |
| Universe | |
| 5th %tile | 6.9 |
| 25th %tile | 7.8 |
| Median | 8.8 |
| 75th %tile | 9.7 |
| 95th %tile | 11.8 |

Anlzd Alpha



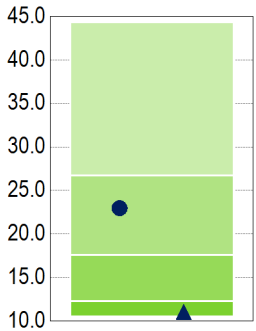
| | |
|----------------|------|
| ● Total Fund | |
| Value | 14.1 |
| Rank | 3 |
| ▲ Policy Index | |
| Value | 0.0 |
| Rank | 83 |
| Universe | |
| 5th %tile | 7.2 |
| 25th %tile | 3.6 |
| Median | 1.8 |
| 75th %tile | 0.1 |
| 95th %tile | -2.0 |

Sharpe Ratio



| | |
|----------------|-----|
| ● Total Fund | |
| Value | 3.8 |
| Rank | 47 |
| ▲ Policy Index | |
| Value | 3.0 |
| Rank | 99 |
| Universe | |
| 5th %tile | 4.4 |
| 25th %tile | 4.0 |
| Median | 3.8 |
| 75th %tile | 3.5 |
| 95th %tile | 3.3 |

Sortino Ratio



| | |
|----------------|------|
| ● Total Fund | |
| Value | 23.0 |
| Rank | 27 |
| ▲ Policy Index | |
| Value | 11.0 |
| Rank | 93 |
| Universe | |
| 5th %tile | 44.4 |
| 25th %tile | 26.8 |
| Median | 17.7 |
| 75th %tile | 12.3 |
| 95th %tile | 10.6 |

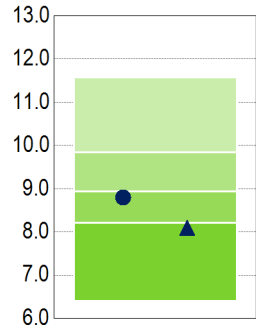
Sortino Ratio requires at least two negative points during the time period in order to calculate.
Sample size is 38 Portfolios



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

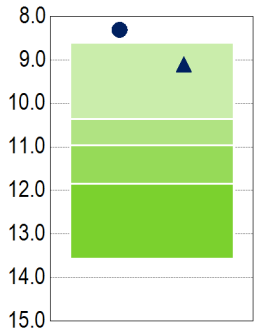
**Total Fund vs. InvMetrics Public DB > \$1B Net (USD)
3 Years**

Anlzd Return



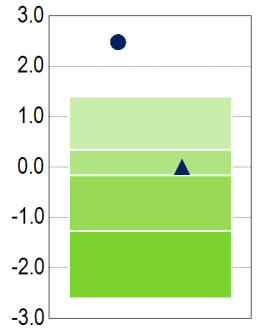
| | |
|----------------|------|
| ● Total Fund | |
| Value | 8.8 |
| Rank | 63 |
| ▲ Policy Index | |
| Value | 8.1 |
| Rank | 81 |
| Universe | |
| 5th %tile | 11.6 |
| 25th %tile | 9.9 |
| Median | 8.9 |
| 75th %tile | 8.2 |
| 95th %tile | 6.4 |

Anlzd Standard Deviation



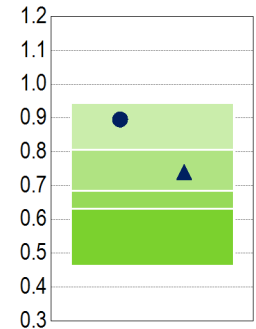
| | |
|----------------|------|
| ● Total Fund | |
| Value | 8.3 |
| Rank | 3 |
| ▲ Policy Index | |
| Value | 9.1 |
| Rank | 13 |
| Universe | |
| 5th %tile | 8.6 |
| 25th %tile | 10.3 |
| Median | 11.0 |
| 75th %tile | 11.8 |
| 95th %tile | 13.5 |

Anlzd Alpha



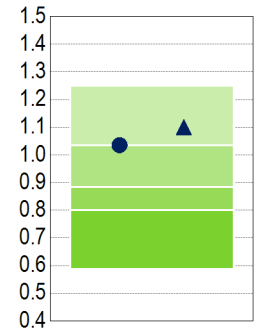
| | |
|----------------|------|
| ● Total Fund | |
| Value | 2.5 |
| Rank | 4 |
| ▲ Policy Index | |
| Value | 0.0 |
| Rank | 44 |
| Universe | |
| 5th %tile | 1.4 |
| 25th %tile | 0.4 |
| Median | -0.2 |
| 75th %tile | -1.3 |
| 95th %tile | -2.6 |

Sharpe Ratio



| | |
|----------------|-----|
| ● Total Fund | |
| Value | 0.9 |
| Rank | 12 |
| ▲ Policy Index | |
| Value | 0.7 |
| Rank | 34 |
| Universe | |
| 5th %tile | 0.9 |
| 25th %tile | 0.8 |
| Median | 0.7 |
| 75th %tile | 0.6 |
| 95th %tile | 0.5 |

Sortino Ratio



| | |
|----------------|-----|
| ● Total Fund | |
| Value | 1.0 |
| Rank | 26 |
| ▲ Policy Index | |
| Value | 1.1 |
| Rank | 20 |
| Universe | |
| 5th %tile | 1.2 |
| 25th %tile | 1.0 |
| Median | 0.9 |
| 75th %tile | 0.8 |
| 95th %tile | 0.6 |

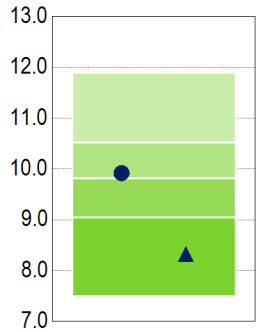
Sortino Ratio requires at least two negative points during the time period in order to calculate.
Sample size is 38 Portfolios



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

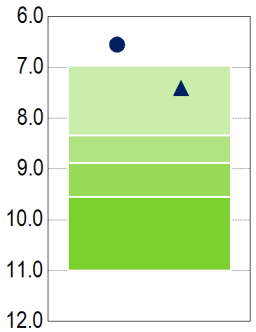
**Total Fund vs. InvMetrics Public DB > \$1B Net (USD)
5 Years**

Anlzd Return



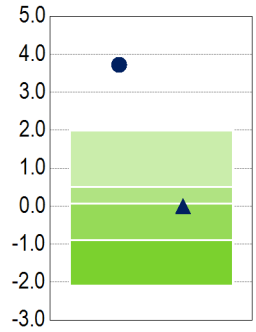
| | |
|----------------|------|
| ● Total Fund | |
| Value | 9.9 |
| Rank | 46 |
| ▲ Policy Index | |
| Value | 8.3 |
| Rank | 92 |
| | |
| Universe | |
| 5th %tile | 11.9 |
| 25th %tile | 10.5 |
| Median | 9.8 |
| 75th %tile | 9.1 |
| 95th %tile | 7.5 |

Anlzd Standard Deviation



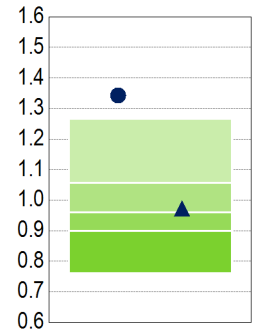
| | |
|----------------|------|
| ● Total Fund | |
| Value | 6.6 |
| Rank | 1 |
| ▲ Policy Index | |
| Value | 7.4 |
| Rank | 13 |
| | |
| Universe | |
| 5th %tile | 7.0 |
| 25th %tile | 8.3 |
| Median | 8.9 |
| 75th %tile | 9.5 |
| 95th %tile | 11.0 |

Anlzd Alpha



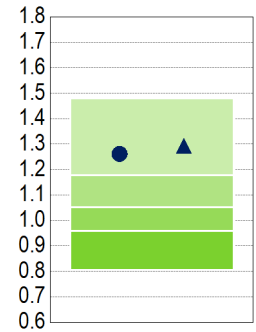
| | |
|----------------|------|
| ● Total Fund | |
| Value | 3.7 |
| Rank | 4 |
| ▲ Policy Index | |
| Value | 0.0 |
| Rank | 54 |
| | |
| Universe | |
| 5th %tile | 2.0 |
| 25th %tile | 0.5 |
| Median | 0.1 |
| 75th %tile | -0.9 |
| 95th %tile | -2.1 |

Sharpe Ratio



| | |
|----------------|-----|
| ● Total Fund | |
| Value | 1.3 |
| Rank | 1 |
| ▲ Policy Index | |
| Value | 1.0 |
| Rank | 47 |
| | |
| Universe | |
| 5th %tile | 1.3 |
| 25th %tile | 1.1 |
| Median | 1.0 |
| 75th %tile | 0.9 |
| 95th %tile | 0.8 |

Sortino Ratio



| | |
|----------------|-----|
| ● Total Fund | |
| Value | 1.3 |
| Rank | 19 |
| ▲ Policy Index | |
| Value | 1.3 |
| Rank | 18 |
| | |
| Universe | |
| 5th %tile | 1.5 |
| 25th %tile | 1.2 |
| Median | 1.1 |
| 75th %tile | 1.0 |
| 95th %tile | 0.8 |

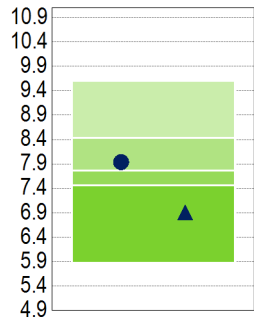
Sortino Ratio requires at least two negative points during the time period in order to calculate.
Sample size is 38 Portfolios



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

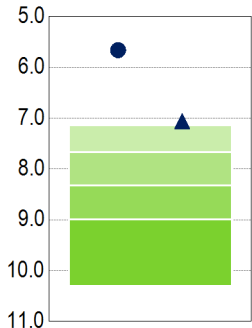
**Total Fund vs. InvMetrics Public DB > \$1B Net (USD)
10 Years**

Anlzd Return



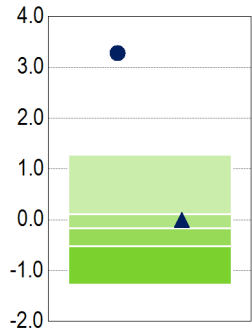
| | |
|----------------|-----|
| ● Total Fund | |
| Value | 7.9 |
| Rank | 46 |
| ▲ Policy Index | |
| Value | 6.9 |
| Rank | 86 |
| Universe | |
| 5th %tile | 9.6 |
| 25th %tile | 8.5 |
| Median | 7.8 |
| 75th %tile | 7.5 |
| 95th %tile | 5.9 |

Anlzd Standard Deviation



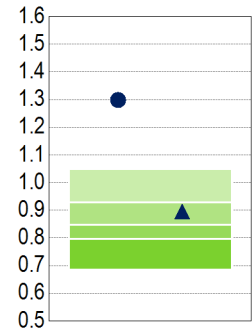
| | |
|----------------|------|
| ● Total Fund | |
| Value | 5.7 |
| Rank | 1 |
| ▲ Policy Index | |
| Value | 7.1 |
| Rank | 1 |
| Universe | |
| 5th %tile | 7.1 |
| 25th %tile | 7.6 |
| Median | 8.3 |
| 75th %tile | 9.0 |
| 95th %tile | 10.3 |

Anlzd Alpha



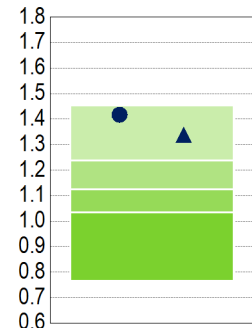
| | |
|----------------|------|
| ● Total Fund | |
| Value | 3.3 |
| Rank | 3 |
| ▲ Policy Index | |
| Value | 0.0 |
| Rank | 40 |
| Universe | |
| 5th %tile | 1.3 |
| 25th %tile | 0.1 |
| Median | -0.2 |
| 75th %tile | -0.5 |
| 95th %tile | -1.3 |

Sharpe Ratio



| | |
|----------------|-----|
| ● Total Fund | |
| Value | 1.3 |
| Rank | 1 |
| ▲ Policy Index | |
| Value | 0.9 |
| Rank | 36 |
| Universe | |
| 5th %tile | 1.0 |
| 25th %tile | 0.9 |
| Median | 0.9 |
| 75th %tile | 0.8 |
| 95th %tile | 0.7 |

Sortino Ratio



| | |
|----------------|-----|
| ● Total Fund | |
| Value | 1.4 |
| Rank | 11 |
| ▲ Policy Index | |
| Value | 1.3 |
| Rank | 16 |
| Universe | |
| 5th %tile | 1.5 |
| 25th %tile | 1.2 |
| Median | 1.1 |
| 75th %tile | 1.0 |
| 95th %tile | 0.8 |

Sortino Ratio requires at least two negative points during the time period in order to calculate.
Sample size is 38 Portfolios



San Bernardino County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

| 1 Years Ending March 31, 2021 | | | | | | | | |
|--|----------|-----------|------|---------------|------|----------------|------------|------|
| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Tracking Error | Info Ratio | Rank |
| Domestic Equity With Beta Overlay | 16.9% | 64.0% | 46 | 17.6% | 98 | 3.3% | 0.4 | 44 |
| Russell 3000 | -- | 62.5% | 67 | 17.7% | 98 | 0.0% | -- | -- |
| International Equity With Beta Overlay | 18.7% | 49.0% | 85 | 13.2% | 10 | 3.8% | -0.3 | |
| MSCI ACWI ex USA Gross | -- | 50.0% | 80 | 15.0% | 68 | 0.0% | -- | -- |
| Global Fixed Income With Beta Overlay | 30.1% | 18.2% | -- | 8.7% | -- | 10.4% | 1.3 | -- |
| BBgBarc Global Aggregate TR | -- | 4.7% | -- | 5.3% | -- | 0.0% | -- | -- |
| U.S. Credit Strategies | 12.8% | 23.6% | 7 | 8.1% | 76 | 10.4% | 0.3 | 8 |
| 50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index | -- | 20.9% | 8 | 5.5% | 5 | 0.0% | -- | -- |
| Non-U.S. Credit Composite | 10.8% | 14.1% | 6 | 8.1% | 99 | 15.5% | -1.1 | |
| ICE BofA Euro High Yield Constrained TR | -- | 30.9% | 2 | 12.0% | 99 | 0.0% | -- | -- |
| Emerging Markets Debt Composite | 8.5% | 6.1% | 99 | 9.2% | 52 | 11.5% | -0.7 | |
| 50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified | -- | 14.5% | 82 | 9.6% | 55 | 0.0% | -- | -- |
| Alpha Pool Composite | 14.2% | 10.3% | 99 | 10.8% | 89 | 10.8% | 0.7 | 41 |
| 91 Day T-Bill + 3% | -- | 3.1% | 99 | 0.0% | 1 | 0.0% | -- | -- |

| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
|----------------------------------|----------|-----------|------|---------------|------|
| Private Equity Composite | 17.1% | 21.3% | -- | 13.5% | -- |
| CJA Global All PE (Qtr Lag) | -- | 28.8% | -- | 23.5% | -- |
| Real Estate Composite | 3.8% | 3.8% | 38 | 3.3% | 65 |
| NCREIF Property Index 1 Qtr. Lag | -- | 1.6% | 70 | 1.9% | 9 |
| Real Assets Composite | 3.7% | 33.7% | 21 | 8.5% | 55 |
| Real Assets Custom Blend | -- | 25.5% | 24 | 8.1% | 54 |

US Credit and Non-US Credit composites are based on physical assets.



San Bernardino County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

| 3 Years Ending March 31, 2021 | | | | | | | | |
|--|----------|-----------|------|---------------|------|----------------|------------|------|
| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Tracking Error | Info Ratio | Rank |
| Domestic Equity With Beta Overlay | 16.9% | 14.3% | 86 | 19.4% | 47 | 3.1% | -0.9 | 70 |
| Russell 3000 | -- | 17.1% | 10 | 19.3% | 40 | 0.0% | -- | -- |
| International Equity With Beta Overlay | 18.7% | 6.5% | 64 | 16.7% | 9 | 2.6% | -0.2 | |
| MSCI ACWI ex USA Gross | -- | 7.0% | 33 | 17.6% | 31 | 0.0% | -- | -- |
| Global Fixed Income With Beta Overlay | 30.1% | 4.2% | -- | 7.7% | -- | 8.2% | 0.2 | -- |
| BBgBarc Global Aggregate TR | -- | 2.8% | -- | 4.5% | -- | 0.0% | -- | -- |
| U.S. Credit Strategies | 12.8% | 7.8% | 4 | 8.3% | 90 | 6.8% | 0.3 | 5 |
| 50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index | -- | 5.4% | 52 | 8.6% | 91 | 0.0% | -- | -- |
| Non-U.S. Credit Composite | 10.8% | 2.3% | 99 | 9.1% | 99 | 11.4% | 0.0 | 59 |
| ICE BofA Euro High Yield Constrained TR | -- | 2.4% | 99 | 12.8% | 99 | 0.0% | -- | -- |
| Emerging Markets Debt Composite | 8.5% | -0.9% | 83 | 7.0% | 3 | 9.4% | -0.3 | |
| 50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified | -- | 1.7% | 67 | 11.3% | 39 | 0.0% | -- | -- |
| Stone Tower (Apollo) | 14.2% | 4.5% | 76 | 7.3% | 41 | 7.3% | 0.0 | 43 |
| 91 Day T-Bill + 3% | -- | 4.4% | 76 | 0.3% | 1 | 0.0% | -- | -- |

| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
|----------------------------------|----------|-----------|------|---------------|------|
| Private Equity Composite | 17.1% | 15.9% | -- | 8.2% | -- |
| CJA Global All PE (Qtr Lag) | -- | 17.3% | -- | 14.3% | -- |
| Real Estate Composite | 3.8% | 5.9% | 23 | 2.4% | 39 |
| NCREIF Property Index 1 Qtr. Lag | -- | 4.9% | 52 | 2.5% | 40 |
| Real Assets Composite | 3.7% | 7.3% | 18 | 11.9% | 73 |
| Real Assets Custom Blend | -- | 2.3% | 70 | 9.5% | 61 |

US Credit and Non-US Credit composites are based on physical assets.



San Bernardino County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

| 5 Years Ending March 31, 2021 | | | | | | | | | |
|--|----------|-----------|------|---------------|------|----------------|------------|------|--|
| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Tracking Error | Info Ratio | Rank | |
| Domestic Equity | 10.2% | 9.8% | -- | 13.9% | -- | 4.4% | -1.5 | -- | |
| Russell 3000 | -- | 16.6% | -- | 15.6% | -- | 0.0% | -- | -- | |
| International Developed | 1.6% | 5.0% | 99 | 11.6% | 1 | 8.6% | -0.4 | | |
| MSCI EAFE | -- | 8.8% | 81 | 14.7% | 30 | 0.0% | -- | -- | |
| International Emerging | 4.3% | 8.4% | -- | 16.1% | -- | 4.0% | -0.9 | -- | |
| MSCI Emerging Markets | -- | 12.1% | -- | 16.4% | -- | 0.0% | -- | -- | |
| U.S. Credit Strategies | 12.8% | 9.0% | 1 | 6.7% | 90 | 5.6% | 0.5 | 1 | |
| 50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index | -- | 6.4% | 12 | 6.8% | 90 | 0.0% | -- | -- | |
| Non-U.S. Credit Composite | 10.8% | 6.6% | 3 | 7.4% | 98 | 10.5% | 0.1 | 72 | |
| ICE BofA Euro High Yield Constrained TR | -- | 5.7% | 4 | 11.1% | 99 | 0.0% | -- | -- | |
| Emerging Markets Debt Composite | 8.5% | 3.4% | 80 | 6.5% | 5 | 8.2% | -0.1 | | |
| 50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified | -- | 4.1% | 68 | 9.7% | 43 | 0.0% | -- | -- | |
| Alpha Pool Composite | 14.2% | 6.9% | 24 | 5.9% | 37 | 6.0% | 0.5 | 16 | |
| 91 Day T-Bill + 3% | -- | 4.2% | 86 | 0.2% | 1 | 0.0% | -- | -- | |

| | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
|----------------------------------|----------|-----------|------|---------------|------|
| Private Equity Composite | 17.1% | 14.7% | -- | 6.8% | -- |
| CJA Global All PE (Qtr Lag) | -- | 16.0% | -- | 11.7% | -- |
| Real Estate Composite | 3.8% | 6.3% | 40 | 2.7% | 43 |
| NCREIF Property Index 1 Qtr. Lag | -- | 5.9% | 58 | 2.7% | 43 |
| Real Assets Composite | 3.7% | 5.4% | 29 | 9.6% | 47 |
| Real Assets Custom Blend | -- | 3.3% | 75 | 7.8% | 37 |

Percent of Total equals 88.1% because Beta Overlay is not included as these statistics are not relevant for alternative asset classes.



MANAGER TOP 10: ASSETS UNDER MANAGEMENT AS OF MARCH 31, 2021

| Manager | Market Value | Portfolio % |
|---------------------------|----------------------|---------------|
| Total Russell | 1,062,674,229 | 8.41% |
| Total Tobam | 978,069,500 | 7.74% |
| SSGA S&P500 Flagship Fund | 864,265,608 | 6.84% |
| Total Ares | 772,470,665 | 6.11% |
| Total Pathway | 729,290,178 | 5.77% |
| Gramercy Funds Management | 694,330,738 | 5.49% |
| Total Alcentra | 574,903,636 | 4.55% |
| Total Partners Group | 556,349,180 | 4.40% |
| Total GoldenTree | 485,289,961 | 3.84% |
| Total Stone Tower | 482,609,840 | 3.82% |
| Total | 7,200,253,534 | 56.97% |



PUBLIC EQUITY PORTFOLIO

| | | | |
|---|--|-------------------------------|---|
| Public Equity Portfolio (28% Target) | US Equities (13% Target) | Large Cap (8%) | Russell Investments (Russell1000 Index) StateStreet Global Advisors S&P500 Index Fund TOBAM Anti-Benchmark US Equity Fund |
| | | Small Cap (2%) | Russell Investments (Russell2000 Index) |
| | | Volatility (3%) | Russell Investments (Russell1000 Index) |
| | International Equities (15% Target) | Developed Markets (6%) | Russell Investments (MSCI EAFE Index) TOBAM Anti-Benchmark World ex-US Fund |
| | | Emerging Markets (6%) | Mondrian Emerging Markets Equity Fund LP Russell Investments (MSCI EM Index) TOBAM Anti-Benchmark EM Equity Fund |
| | | Volatility (3%) | Russell Investments (MSCI EAFE Index) |



San Bernardino County Employees' Retirement Association

GLOBAL EQUITY STRATEGIES - NET

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|--|----------------------|----------------|------------|-----------|----------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|
| Total Equity | 2,031,055,503 | 16.1 | 3.4 | 99 | 27.1 | 99 | 53.7 | 80 | 11.5 | 61 | 9.9 | 99 | 6.0 | 99 |
| MSCI ACWI | | | 4.6 | 96 | 29.7 | 76 | 54.6 | 76 | 12.1 | 53 | 13.2 | 52 | 9.1 | 81 |
| Excess Return | | | -1.2 | | -2.6 | | -0.9 | | -0.6 | | -3.3 | | -3.1 | |
| InvMetrics Public DB Total Eq Net Median | | | 5.9 | | 32.6 | | 58.6 | | 12.2 | | 13.2 | | 9.9 | |
| Domestic Equity With Beta Overlay | 2,133,769,907 | 16.9 | 6.0 | 98 | 32.3 | 91 | 64.0 | 46 | 14.3 | 86 | 12.0 | 99 | -- | -- |
| Russell 3000 | | | 6.3 | 94 | 33.2 | 80 | 62.5 | 67 | 17.1 | 10 | 16.6 | 19 | 13.8 | 4 |
| Excess Return | | | -0.3 | | -0.9 | | 1.5 | | -2.8 | | -4.6 | | | |
| InvMetrics Public DB US Eq Net Median | | | 7.7 | | 34.8 | | 63.5 | | 15.7 | | 15.6 | | 12.8 | |
| Domestic Equity | 1,289,946,721 | 10.2 | 5.5 | -- | 27.5 | -- | 54.3 | -- | 15.2 | -- | 9.8 | -- | 5.6 | -- |
| Russell 3000 | | | 6.3 | -- | 33.2 | -- | 62.5 | -- | 17.1 | -- | 16.6 | -- | 13.8 | -- |
| Excess Return | | | -0.8 | | -5.7 | | -8.2 | | -1.9 | | -6.8 | | -8.2 | |
| Tobam AB US Equity | 424,492,800 | 3.4 | 4.2 | 76 | 26.2 | 84 | 55.4 | 77 | 13.1 | 59 | -- | -- | -- | -- |
| Russell 3000 | | | 6.3 | 63 | 33.2 | 60 | 62.5 | 61 | 17.1 | 34 | 16.6 | 35 | 13.8 | 29 |
| Excess Return | | | -2.1 | | -7.0 | | -7.1 | | -4.0 | | | | | |
| eV All US Equity Net Median | | | 8.7 | | 36.5 | | 67.6 | | 14.5 | | 14.7 | | 12.3 | |
| Large Cap Equity | 865,205,349 | 6.8 | 6.2 | 64 | 28.2 | 77 | 53.8 | 82 | 15.9 | 42 | 10.7 | 86 | 6.9 | 99 |
| S&P 500 | | | 6.2 | 64 | 29.7 | 71 | 56.4 | 75 | 16.8 | 37 | 16.3 | 38 | 13.9 | 27 |
| Excess Return | | | 0.0 | | -1.5 | | -2.6 | | -0.9 | | -5.6 | | -7.0 | |
| eV All US Equity Net Median | | | 8.7 | | 36.5 | | 67.6 | | 14.5 | | 14.7 | | 12.3 | |
| SSgA S&P500 | 864,265,608 | 6.8 | 6.2 | 64 | 29.7 | 71 | 56.3 | 75 | 16.6 | 38 | 13.1 | 66 | 9.7 | 88 |
| S&P 500 | | | 6.2 | 64 | 29.7 | 71 | 56.4 | 75 | 16.8 | 37 | 16.3 | 38 | 13.9 | 27 |
| Excess Return | | | 0.0 | | 0.0 | | -0.1 | | -0.2 | | -3.2 | | -4.2 | |
| eV All US Equity Net Median | | | 8.7 | | 36.5 | | 67.6 | | 14.5 | | 14.7 | | 12.3 | |
| Russell US Large Cap Volatility | 939,741 | 0.0 | | | | | | | | | | | | |
| Small Cap Equity | 248,572 | 0.0 | | | | | | | | | | | | |
| Russell US Small Cap Volatility | 248,572 | 0.0 | | | | | | | | | | | | |



San Bernardino County Employees' Retirement Association

GLOBAL EQUITY STRATEGIES - NET

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|--|----------------------|----------------|-------------|-----------|----------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|
| International Equity With Beta Overlay | 2,365,253,721 | 18.7 | 6.7 | 1 | 28.1 | 80 | 49.0 | 85 | 6.5 | 64 | 9.5 | 73 | -- | -- |
| MSCI ACWI ex USA Gross | | | <u>3.6</u> | 42 | <u>29.0</u> | 72 | <u>50.0</u> | 80 | <u>7.0</u> | 33 | <u>10.3</u> | 32 | <u>5.4</u> | 71 |
| Excess Return | | | 3.1 | | -0.9 | | -1.0 | | -0.5 | | -0.8 | | | |
| InvMetrics Public DB ex-US Eq Net Median | | | 3.4 | | 30.1 | | 54.6 | | 6.7 | | 10.0 | | 5.9 | |
| International Equity | 741,108,782 | 5.9 | -0.1 | -- | 27.1 | -- | 53.6 | -- | 4.4 | -- | 8.4 | -- | 5.3 | -- |
| MSCI ACWI | | | <u>4.6</u> | -- | <u>29.7</u> | -- | <u>54.6</u> | -- | <u>12.1</u> | -- | <u>13.2</u> | -- | <u>9.1</u> | -- |
| Excess Return | | | -4.7 | | -2.6 | | -1.0 | | -7.7 | | -4.8 | | -3.8 | |
| International Developed | 200,429,160 | 1.6 | -0.2 | 86 | 17.6 | 98 | 37.5 | 99 | 3.9 | 99 | 5.0 | 99 | 8.4 | 29 |
| MSCI EAFE | | | <u>3.5</u> | 34 | <u>25.8</u> | 82 | <u>44.6</u> | 84 | <u>6.0</u> | 81 | <u>8.8</u> | 81 | <u>5.5</u> | 74 |
| Excess Return | | | -3.7 | | -8.2 | | -7.1 | | -2.1 | | -3.8 | | 2.9 | |
| InvMetrics Public DB Dev Mkt ex-US Eq Net Median | | | 2.1 | | 28.6 | | 50.6 | | 8.7 | | 10.2 | | 7.0 | |
| Russell International Volatility | 16,449 | 0.0 | | | | | | | | | | | | |
| Tobam AB World Ex-US Equity | 200,412,710 | 1.6 | -0.2 | 82 | 17.6 | 97 | 38.7 | 96 | -- | -- | -- | -- | -- | -- |
| MSCI ACWI ex USA | | | <u>3.5</u> | 47 | <u>28.7</u> | 70 | <u>49.4</u> | 80 | <u>6.5</u> | 62 | <u>9.8</u> | 66 | <u>4.9</u> | 85 |
| Excess Return | | | -3.7 | | -11.1 | | -10.7 | | | | | | | |
| eV All ACWI ex-US Equity Net Median | | | 3.1 | | 31.6 | | 57.0 | | 8.2 | | 11.3 | | 6.9 | |
| International Emerging | 540,679,622 | 4.3 | -0.2 | -- | 28.0 | -- | 55.4 | -- | 3.9 | -- | 8.4 | -- | 2.2 | -- |
| MSCI Emerging Markets | | | <u>2.3</u> | -- | <u>34.1</u> | -- | <u>58.4</u> | -- | <u>6.5</u> | -- | <u>12.1</u> | -- | <u>3.7</u> | -- |
| Excess Return | | | -2.5 | | -6.1 | | -3.0 | | -2.6 | | -3.7 | | -1.5 | |
| Mondrian | 187,515,632 | 1.5 | 3.9 | 48 | 40.6 | 22 | 61.9 | 59 | 7.0 | 49 | 9.2 | 82 | 3.7 | 68 |
| MSCI Emerging Markets | | | <u>2.3</u> | 63 | <u>34.1</u> | 67 | <u>58.4</u> | 71 | <u>6.5</u> | 53 | <u>12.1</u> | 56 | <u>3.7</u> | 68 |
| Excess Return | | | 1.6 | | 6.5 | | 3.5 | | 0.5 | | -2.9 | | 0.0 | |
| eV Emg Mkts Equity Net Median | | | 3.3 | | 36.5 | | 63.9 | | 6.8 | | 12.6 | | 4.4 | |
| Tobam | 353,163,990 | 2.8 | -2.2 | 98 | 22.2 | 98 | 52.1 | 87 | 2.5 | 90 | 6.6 | 96 | -- | -- |
| MSCI Emerging Markets | | | <u>2.3</u> | 63 | <u>34.1</u> | 67 | <u>58.4</u> | 71 | <u>6.5</u> | 53 | <u>12.1</u> | 56 | <u>3.7</u> | 68 |
| Excess Return | | | -4.5 | | -11.9 | | -6.3 | | -4.0 | | -5.5 | | | |
| eV Emg Mkts Equity Net Median | | | 3.3 | | 36.5 | | 63.9 | | 6.8 | | 12.6 | | 4.4 | |



GLOBAL DEBT STRATEGIES

| | | | |
|---|--|---|---|
| Global Debt Strategies (35% Target) | US Fixed Income (15% Target) | Core Fixed Income (2%) | Russell Investments (Bloomberg Barclays US Agg. Bond TR Index) |
| | | Credit Strategies/ High Yield Strategies (13%) | Apollo Credit Strategies Fund LP (MCA) Apollo Offshore Credit Fund LTD (MCA) Bardin Hill Direct Portfolio (MCA) Bardin Hill Solutions Fund LP (MCA) Beach Point Select Fund LP GoldenTree Distressed Debt Fund 2010 GoldenTree Asset Management SMA Kayne Anderson BDC (MCA) MacKay Shields High Yield Bond Strategy SMA Manulife Asset Management SMA Waterfall - Sutherland (Ready Cap) REIT Holdings LP (MCA) Waterfall Asset Management SMA (MCA) Waterfall Victoria Fund LP (MCA) |
| | Global Fixed Income (20% Target) | International Core (1%) | Russell Investments (Barclays Global Aggregate ex US Unhedged) Alcentra European Direct Lending Fund Alcentra Strategic Credit Fund Alcentra Limited SMA Alcentra Structured Credit Opportunity Fund III Alcentra Viaduct Fund LP Cairn Capital Limited SMA Cairn Capstone Special Opportunities Fund Cairn Pathfinder Fund I Cairn Pathfinder Fund III Marathon Asset Management SMA Marathon CLO Equity Fund Marathon European Credit Opportunity Fund II Marathon European Credit Opportunity Fund III Marathon Structured Product Strategies Fund Marathon Structured Product Strategies Fund II |
| | | Emerging Market Debt (8%) | Ashmore Emerging Markets MCA Gramercy Capital Solutions Fund (MCA) Gramercy Distressed Argentina Fund III Private (MCA) Gramercy Distressed Argentina Fund IV Private (MCA) Gramercy Distressed Opportunity Fund II (MCA) Gramercy Distressed Opportunity Fund III (MCA) Gramercy Emerging Markets Dislocation Fund (MCA) Gramercy Separate Account (MCA) Gramercy Venezuela Opportunity Fund (MCA) Gramercy Venezuela Opportunity Fund II (MCA) Gramercy Venezuela Special Situations Fund (MCA) Marathon Global Emerging Markets Fund PGIM Emerging Market Debt Opportunities Fund |



San Bernardino County Employees' Retirement Association

GLOBAL DEBT STRATEGIES - NET

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|--|----------------------|-------------------|-------------|-----------|----------------------|-----------|-------------|-----------|--------------|-----------|--------------|-----------|---------------|-----------|
| Global Fixed Income With Beta Overlay | 3,804,126,896 | 30.1 | 5.3 | -- | 17.2 | -- | 18.2 | -- | 4.2 | -- | 3.6 | -- | -- | -- |
| <i>BBgBarc Global Aggregate TR</i> | | | <u>-4.5</u> | -- | <u>1.3</u> | -- | <u>4.7</u> | -- | <u>2.8</u> | -- | <u>2.7</u> | -- | <u>2.2</u> | -- |
| Excess Return | | | 9.8 | | 15.9 | | 13.5 | | 1.4 | | 0.9 | | | |
| Total Fixed | 4,068,626,896 | 32.2 | 4.6 | 2 | 14.7 | 2 | 15.6 | 4 | 3.6 | 92 | 6.7 | 3 | 5.4 | 3 |
| <i>InvMetrics Public DB Total Fix Inc Net Median</i> | | | -2.1 | | 1.6 | | 7.6 | | 4.7 | | 3.9 | | 3.9 | |
| U.S. Credit Strategies | 1,622,325,316 | 12.8 | 5.4 | 1 | 19.4 | 1 | 23.6 | 7 | 7.8 | 4 | 9.0 | 1 | 6.9 | 1 |
| <i>50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index</i> | | | <u>1.2</u> | 5 | <u>10.4</u> | 8 | <u>20.9</u> | 8 | <u>5.4</u> | 52 | <u>6.4</u> | 12 | <u>5.4</u> | 12 |
| Excess Return | | | 4.2 | | 9.0 | | 2.7 | | 2.4 | | 2.6 | | 1.5 | |
| <i>ICE BofA US High Yield TR</i> | | | 0.9 | 6 | 12.5 | 1 | 23.3 | 7 | 6.5 | 24 | 7.9 | 1 | 6.3 | 1 |
| <i>eV Global Credit Fixed Inc Net Median</i> | | | -3.5 | | 3.2 | | 13.2 | | 5.5 | | 5.1 | | 4.5 | |
| Golden Tree Asset Management | 537,366,980 | 4.3 | 5.1 | 1 | 27.8 | 1 | 43.5 | 1 | 10.4 | 1 | 11.6 | 1 | 8.6 | 1 |
| Beach Point Capital (Formerly Post) | 196,316,847 | 1.6 | 6.9 | 1 | 24.1 | 1 | 16.6 | 17 | 8.9 | 1 | 10.8 | 1 | 8.7 | 1 |
| Golden Tree Distressed Debt | 14,370,918 | 0.1 | 13.8 | 1 | -19.1 | 99 | -19.1 | 99 | -8.1 | 99 | -2.6 | 99 | 5.7 | 6 |
| Mackay / Gold Coast | 79,255,017 | 0.6 | 0.7 | 6 | 12.1 | 6 | 21.7 | 8 | 6.5 | 27 | 8.1 | 1 | 6.2 | 1 |
| MD SASS Waterfall Victoria | 23,676,258 | 0.2 | 10.3 | -- | -21.4 | -- | 4.1 | -- | 4.5 | -- | 6.8 | -- | -- | -- |
| Russell Interest Rate Hedging | 12,012,381 | 0.1 | 142.7 | 1 | 128.6 | 1 | 213.1 | 1 | -18.6 | 99 | -15.2 | 99 | -23.1 | 99 |
| Stone Tower Credit (Apollo) | 123,741,918 | 1.0 | 5.5 | 1 | 12.3 | 15 | 18.6 | 35 | 12.7 | 2 | 12.0 | 1 | -- | -- |
| Gold Coast Capital IV | 116,316,337 | 0.9 | 3.4 | -- | 10.3 | -- | 18.7 | -- | 5.4 | -- | 5.8 | -- | -- | -- |
| Waterfall Asset Management | 62,976,050 | 0.5 | 11.9 | -- | 53.4 | -- | 58.9 | -- | 10.5 | -- | 13.0 | -- | -- | -- |
| Waterfall Victoria | 56,076,776 | 0.4 | 5.8 | -- | 11.8 | -- | 1.8 | -- | 6.9 | -- | 8.1 | -- | -- | -- |
| Stone Tower Offshore Credit (Apollo) | 358,867,921 | 2.8 | 3.9 | -- | 15.0 | -- | 8.6 | -- | 5.3 | -- | 7.6 | -- | 6.8 | -- |
| AG Capital | 6,618 | 0.0 | -1.5 | 15 | -3.4 | 99 | 42.3 | 1 | 11.4 | 1 | 5.7 | 24 | 5.5 | 8 |
| KAYNE ANDERSON BDC, LLC | 41,314,280 | 0.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |



San Bernardino County Employees' Retirement Association

GLOBAL DEBT STRATEGIES - NET

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|--|----------------------|----------------|-------------|----------|----------------|----------|-------------|-----------|------------|-----------|------------|----------|------------|-----------|
| Non-U.S. Fixed Income Composite | 2,446,301,580 | 19.4 | 4.0 | 2 | 11.5 | 2 | 10.5 | 23 | 1.1 | 99 | 5.4 | 9 | 4.3 | 19 |
| <i>BBgBarc Global Aggregate ex US</i> | | | <u>-5.3</u> | 99 | <u>3.6</u> | 19 | <u>7.2</u> | 51 | <u>1.1</u> | 99 | <u>2.2</u> | 99 | <u>1.3</u> | 99 |
| Excess Return | | | 9.3 | | 7.9 | | 3.3 | | 0.0 | | 3.2 | | 3.0 | |
| <i>InvMetrics Public DB Total Fix Inc Net Median</i> | | | -2.1 | | 1.6 | | 7.6 | | 4.7 | | 3.9 | | 3.9 | |
| Non-U.S. Credit Composite | 1,367,053,027 | 10.8 | 7.2 | 2 | 16.0 | 2 | 14.1 | 6 | 2.3 | 99 | 6.6 | 3 | 5.2 | 3 |
| <i>ICE BofA Euro High Yield Constrained TR</i> | | | <u>-2.5</u> | 65 | <u>15.0</u> | 2 | <u>30.9</u> | 2 | <u>2.4</u> | 99 | <u>5.7</u> | 4 | <u>4.2</u> | 28 |
| Excess Return | | | 9.7 | | 1.0 | | -16.8 | | -0.1 | | 0.9 | | 1.0 | |
| Marathon/Gold Coast | 251,827,778 | 2.0 | 2.2 | 1 | 7.8 | 12 | 5.8 | 99 | 8.4 | 2 | 10.5 | 1 | 6.8 | 1 |
| Halcyon Asset Management | 176,412,172 | 1.4 | 6.9 | 1 | 4.8 | 26 | -15.9 | 99 | -3.5 | 99 | 1.4 | 99 | -- | -- |
| <i>ICE BofA Euro High Yield Constrained TR</i> | | | <u>-2.5</u> | 18 | <u>15.0</u> | 1 | <u>30.9</u> | 1 | <u>2.4</u> | 99 | <u>5.7</u> | 21 | <u>4.2</u> | 78 |
| Excess Return | | | 9.4 | | -10.2 | | -46.8 | | -5.9 | | -4.3 | | | |
| <i>eV Global Credit Fixed Inc Net Median</i> | | | -3.5 | | 3.2 | | 13.2 | | 5.5 | | 5.1 | | 4.5 | |
| Cairn Composite | 363,909,440 | 2.9 | 4.3 | 1 | 13.4 | 1 | 15.6 | 18 | 2.3 | 99 | 7.6 | 3 | 4.3 | 58 |
| <i>ICE BofA Euro High Yield Constrained TR</i> | | | <u>-2.5</u> | 18 | <u>15.0</u> | 1 | <u>30.9</u> | 1 | <u>2.4</u> | 99 | <u>5.7</u> | 21 | <u>4.2</u> | 78 |
| Excess Return | | | 6.8 | | -1.6 | | -15.3 | | -0.1 | | 1.9 | | 0.1 | |
| <i>eV Global Credit Fixed Inc Net Median</i> | | | -3.5 | | 3.2 | | 13.2 | | 5.5 | | 5.1 | | 4.5 | |
| Alcentra - KT1 | 444,830,104 | 3.5 | 13.4 | -- | 28.2 | -- | 44.7 | -- | 3.9 | -- | 8.7 | -- | -- | -- |
| <i>ICE BofA Euro High Yield Constrained TR</i> | | | <u>-2.5</u> | -- | <u>15.0</u> | -- | <u>30.9</u> | -- | <u>2.4</u> | -- | <u>5.7</u> | -- | <u>4.2</u> | -- |
| Excess Return | | | 15.9 | | 13.2 | | 13.8 | | 1.5 | | 3.0 | | | |
| Alcentra SP1 - KT1 | 4,585,043 | 0.0 | 2.1 | -- | 4.4 | -- | -3.0 | -- | -28.6 | -- | -- | -- | -- | -- |
| <i>ICE BofA Euro High Yield Constrained TR</i> | | | <u>-2.5</u> | -- | <u>15.0</u> | -- | <u>30.9</u> | -- | <u>2.4</u> | -- | <u>5.7</u> | -- | <u>4.2</u> | -- |
| Excess Return | | | 4.6 | | -10.6 | | -33.9 | | -31.0 | | | | | |
| Alcentra SP2 - KT1 | 16,114,908 | 0.1 | -3.9 | -- | -18.5 | -- | -16.6 | -- | -14.8 | -- | -- | -- | -- | -- |
| <i>ICE BofA Euro High Yield Constrained TR</i> | | | <u>-2.5</u> | -- | <u>15.0</u> | -- | <u>30.9</u> | -- | <u>2.4</u> | -- | <u>5.7</u> | -- | <u>4.2</u> | -- |
| Excess Return | | | -1.4 | | -33.5 | | -47.5 | | -17.2 | | | | | |
| Alcentra SP3 - KT1 | 52,924,374 | 0.4 | 19.7 | -- | 68.0 | -- | 2.3 | -- | 4.3 | -- | -- | -- | -- | -- |
| <i>ICE BofA Euro High Yield Constrained TR</i> | | | <u>-2.5</u> | -- | <u>15.0</u> | -- | <u>30.9</u> | -- | <u>2.4</u> | -- | <u>5.7</u> | -- | <u>4.2</u> | -- |
| Excess Return | | | 22.2 | | 53.0 | | -28.6 | | 1.9 | | | | | |
| Alcentra SP4 - KT1 | 56,449,208 | 0.4 | -0.4 | -- | 8.7 | -- | 7.2 | -- | -- | -- | -- | -- | -- | -- |
| <i>ICE BofA Euro High Yield Constrained TR</i> | | | <u>-2.5</u> | -- | <u>15.0</u> | -- | <u>30.9</u> | -- | <u>2.4</u> | -- | <u>5.7</u> | -- | <u>4.2</u> | -- |
| Excess Return | | | 2.1 | | -6.3 | | -23.7 | | | | | | | |



San Bernardino County Employees' Retirement Association

GLOBAL DEBT STRATEGIES - NET

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|--|----------------------|----------------|-------------|-----------|----------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|-------------|-----------|
| Emerging Markets Debt Composite | 1,079,248,553 | 8.5 | 0.1 | 6 | 6.1 | 37 | 6.1 | 99 | -0.9 | 83 | 3.4 | 80 | 2.3 | 70 |
| <i>50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified</i> | | | <i>-5.6</i> | <i>75</i> | <i>3.1</i> | <i>86</i> | <i>14.5</i> | <i>82</i> | <i>1.7</i> | <i>67</i> | <i>4.1</i> | <i>68</i> | <i>3.1</i> | <i>65</i> |
| Excess Return | | | 5.7 | | 3.0 | | -8.4 | | -2.6 | | -0.7 | | -0.8 | |
| <i>eV All Emg Mkts Fixed Inc Net Median</i> | | | <i>-4.2</i> | | <i>5.4</i> | | <i>18.2</i> | | <i>3.4</i> | | <i>5.2</i> | | <i>4.3</i> | |
| Ashmore Emerging Markets Liquid Investments | 199,568,299 | 1.6 | -5.6 | 75 | 3.1 | 86 | 14.5 | 82 | 1.7 | 67 | 4.1 | 68 | 3.1 | 65 |
| <i>JP Morgan GBI - EM Global Diversified Index</i> | | | <i>-6.7</i> | <i>82</i> | <i>2.9</i> | <i>86</i> | <i>13.0</i> | <i>91</i> | <i>-0.8</i> | <i>82</i> | <i>3.1</i> | <i>84</i> | <i>0.5</i> | <i>80</i> |
| Excess Return | | | 1.1 | | 0.2 | | 1.5 | | 2.5 | | 1.0 | | 2.6 | |
| <i>eV All Emg Mkts Fixed Inc Net Median</i> | | | <i>-4.2</i> | | <i>5.4</i> | | <i>18.2</i> | | <i>3.4</i> | | <i>5.2</i> | | <i>4.3</i> | |
| Ashmore Local Currency | 66,569,357 | 0.5 | -7.9 | 98 | 7.2 | 39 | 24.8 | 14 | -3.6 | 99 | 2.3 | 89 | -0.6 | 99 |
| <i>JP Morgan ELM+ TR USD</i> | | | <i>-2.6</i> | <i>54</i> | <i>4.7</i> | <i>53</i> | <i>8.3</i> | <i>77</i> | <i>-0.6</i> | <i>99</i> | <i>2.0</i> | <i>94</i> | <i>-0.3</i> | <i>99</i> |
| Excess Return | | | -5.3 | | 2.5 | | 16.5 | | -3.0 | | 0.3 | | -0.3 | |
| <i>JP Morgan EMBI Global Index</i> | | | <i>-4.7</i> | <i>84</i> | <i>2.8</i> | <i>70</i> | <i>14.3</i> | <i>48</i> | <i>3.9</i> | <i>61</i> | <i>4.7</i> | <i>46</i> | <i>5.4</i> | <i>19</i> |
| <i>eV All Global Fixed Inc Net Median</i> | | | <i>-2.4</i> | | <i>5.1</i> | | <i>13.6</i> | | <i>4.2</i> | | <i>4.5</i> | | <i>3.6</i> | |
| Gramercy Funds Management LLC | 694,330,738 | 5.5 | 1.9 | 1 | 2.4 | 94 | -0.8 | 99 | -1.7 | 92 | 1.8 | 94 | -- | -- |
| <i>JP Morgan ELM+ TR USD</i> | | | <i>-2.6</i> | <i>32</i> | <i>4.7</i> | <i>65</i> | <i>8.3</i> | <i>98</i> | <i>-0.6</i> | <i>79</i> | <i>2.0</i> | <i>93</i> | <i>-0.3</i> | <i>97</i> |
| Excess Return | | | 4.5 | | -2.3 | | -9.1 | | -1.1 | | -0.2 | | | |
| <i>JP Morgan EMBI Global Index</i> | | | <i>-4.7</i> | <i>60</i> | <i>2.8</i> | <i>87</i> | <i>14.3</i> | <i>82</i> | <i>3.9</i> | <i>41</i> | <i>4.7</i> | <i>61</i> | <i>5.4</i> | <i>17</i> |
| <i>eV All Emg Mkts Fixed Inc Net Median</i> | | | <i>-4.2</i> | | <i>5.4</i> | | <i>18.2</i> | | <i>3.4</i> | | <i>5.2</i> | | <i>4.3</i> | |
| PGIM Fixed Income | 118,780,160 | 0.9 | 5.1 | 1 | 26.8 | 1 | 10.5 | 97 | 5.0 | 27 | 9.9 | 1 | -- | -- |
| <i>50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified</i> | | | <i>-5.6</i> | <i>75</i> | <i>3.1</i> | <i>86</i> | <i>14.5</i> | <i>82</i> | <i>1.7</i> | <i>67</i> | <i>4.1</i> | <i>68</i> | <i>3.1</i> | <i>65</i> |
| Excess Return | | | 10.7 | | 23.7 | | -4.0 | | 3.3 | | 5.8 | | | |
| <i>JP Morgan EMBI Global Index</i> | | | <i>-4.7</i> | <i>60</i> | <i>2.8</i> | <i>87</i> | <i>14.3</i> | <i>82</i> | <i>3.9</i> | <i>41</i> | <i>4.7</i> | <i>61</i> | <i>5.4</i> | <i>17</i> |
| <i>eV All Emg Mkts Fixed Inc Net Median</i> | | | <i>-4.2</i> | | <i>5.4</i> | | <i>18.2</i> | | <i>3.4</i> | | <i>5.2</i> | | <i>4.3</i> | |



ABSOLUTE RETURN (ALPHA POOL)

| | |
|--|---|
| <p>Absolute Return (Alpha Pool) (7% Target)</p> | <p>Core & Credit Strategies (7%)</p> <ul style="list-style-type: none">Apollo Global SMA (MCA)Apollo MidCap Financial Holdings Trust (MCA)Ares ECO Master Fund II, LTD (MCA)Birch Grove Credit Strategies FundCorrum Capital Global Credit Opportunities FundCorrum Capital GCO Co-Invest FundStateStreet Global Advisors Short Term Treasury Strategy SMAZais Group SMAZais Opportunity Fund, LTDZais Zephyr A-6, LPZais Zephyr A-7, LPZais Zephyr A-8, LP |
|--|---|



San Bernardino County Employees' Retirement Association

ALPHA POOL STRATEGIES - NET

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|-------------------------------|----------------------|-------------------|-------------|-----------|----------------------|-----------|-------------|-----------|--------------|-----------|--------------|-----------|---------------|-----------|
| Alpha Pool Composite | 1,799,882,837 | 14.2 | 2.2 | 53 | 16.4 | 51 | 10.3 | 99 | 4.5 | 76 | 6.9 | 24 | 5.4 | 21 |
| <i>91 Day T-Bill + 3%</i> | | | <u>0.8</u> | 78 | <u>2.3</u> | 99 | <u>3.1</u> | 99 | <u>4.4</u> | 76 | <u>4.2</u> | 86 | <u>3.6</u> | 59 |
| Excess Return | | | 1.4 | | 14.1 | | 7.2 | | 0.1 | | 2.7 | | 1.8 | |
| Alpha Liquidity (Ssga) | 206,418,307 | 1.6 | 0.1 | 28 | -0.2 | 96 | 0.2 | 98 | 1.8 | 92 | 1.4 | 98 | 0.9 | 99 |
| Apollo Global Management | 9,466,474 | 0.1 | -33.8 | 99 | -21.0 | 99 | -14.0 | 99 | 7.1 | 6 | 12.9 | 1 | -- | -- |
| Ares Eco Master Fund II | 582,412,050 | 4.6 | 2.3 | 6 | 15.7 | 6 | 8.6 | 76 | 5.3 | 33 | -- | -- | -- | -- |
| Birch Grove Credit Strategies | 160,228,040 | 1.3 | 9.0 | 1 | 23.0 | 1 | 12.0 | 56 | 9.0 | 3 | 8.2 | 5 | -- | -- |
| Corrum Capital | 239,807,107 | 1.9 | 0.0 | 29 | 5.3 | 49 | -7.3 | 99 | -0.4 | 99 | 2.9 | 79 | 2.5 | 76 |
| Zais | 132,686,090 | 1.0 | 3.6 | 1 | 31.1 | 1 | 0.2 | 98 | -0.3 | 99 | 6.7 | 17 | 7.2 | 2 |
| Zais Group Invest Advisors | 334,121,351 | 2.6 | 4.2 | 1 | 26.7 | 1 | 48.4 | 1 | 5.3 | 33 | 11.7 | 1 | -- | -- |
| Zais Zephyr A 6 LP | 17,566,761 | 0.1 | 2.0 | 7 | 73.2 | 1 | -8.1 | 99 | 7.5 | 4 | 10.7 | 1 | -- | -- |
| Zais Zephyr 8 | 40,252,536 | 0.3 | 0.6 | 21 | 18.2 | 4 | 10.8 | 63 | -- | -- | -- | -- | -- | -- |
| Zais Zephyr 7 | 51,924,120 | 0.4 | 6.1 | 1 | 20.6 | 3 | 56.3 | 1 | -- | -- | -- | -- | -- | -- |



PRIVATE ASSETS

| | | | |
|-----------------------------|----------------|--|---|
| Private Assets (16% Target) | Private Equity | Diversified | Adams Street SMA (MCA) Kayne Anderson Co-Invest (MCA) Partners Group SMA (MCA) Pathway Capital SMA (MCA) Pathway PE Fund VII LLC SL Capital European Strategic Partners 2004 SL Capital European Strategic Partners 2008 |
| | | Buyout Funds | Aurora Equity Partners IV Kayne Partners Fund IV LP (MCA) Kayne Partners Fund V LP (MCA) Partners Group Direct Equity 2016 (MCA) Partners Group Direct Investments 2012 LP (MCA) Partners Group European Buyout 2005 (A) LP Waterfall Sentinel Fund (MCA) |
| | | Venture Funds | Industry Ventures Direct LP (MCA) Industry Ventures Direct II LP (MCA) Industry Ventures Direct III LP (MCA) Industry Ventures Fund VI LP (MCA) Industry Ventures MCA Industry Ventures Partnership Holdings II LP (MCA) Industry Ventures Partnership Holdings III LP (MCA) Industry Ventures Partnership Holdings III-A LP (MCA) Industry Ventures Partnership Holdings IV LP (MCA) Industry Ventures Partnership Holdings V LP (MCA) Industry Ventures Partnership Holdings VI LP (MCA) Industry Ventures Special Opportunities Fund II-A LP (MCA) Industry Ventures Tech Buyout, LP (MCA) |
| | | Secondary Funds | Aberdeen Standard Secondary Opportunities Fund IV Industry Ventures Secondary VII LP (MCA) Industry Ventures Secondary VIII LP (MCA) Lexington Capital Partners VI Lexington Capital Partners VII Lexington Middle Market Investors I Lexington Middle Market Investors II Partners Group Secondary 2008 LP SL Capital Secondary Opportunities Fund I SL Capital Secondary Opportunities Fund II SL Capital Secondary Opportunities Fund III |
| | | Sector Specific Funds | Kayne Anderson Energy Fund VII LP Tennenbaum Energy Opportunities Fund LP (MCA) |
| | Private Debt | Direct Lending | Ares Private Credit Solutions Fund (MCA) Kayne Anderson Renewables Opportunities Portfolio (MCA) Tennenbaum Lending Fund VIII LLC (MCA) Tennenbaum Waterman Fund LP (MCA) |
| | | Credit/Distressed/ Opportunistic/ Special Situations | Ares ICOF II (MCA) Ares ICOF III (MCA) Ares SMA (MCA) Ares Special Situations Fund IV (MCA) Catalyst Fund LP II Crestline Portfolio Financing Fund Crestline Portfolio Financing Fund II Kayne Anderson CLO Partners II (MCA) Kayne Anderson Solutions Fund (MCA) Sigular Guff Distressed Opportunity Fund III LP Tennenbaum Co-Invest (MCA) Tennenbaum Opportunities Fund V LLC (MCA) Tennenbaum Opportunities Fund VI LLC (MCA) Tennenbaum Special Situations Fund IX LLC (MCA) |



REAL ESTATE

| | | |
|--|------------------------------------|---|
| Real Estate Portfolio (7% Target) | Core Real Estate (3.5%) | <p>Core Real Estate</p> <ul style="list-style-type: none"> 348 West Hospitality Invesco Real Estate Asia Fund Kayne Anderson Real Estate Debt III (MCA) Kayne Anderson Real Estate Debt IV (MCA) Marathon Real Estate Debt Fund PRISA II PGIM Real Estate Capital VI LP PGIM Real Estate Capital VII LP |
| | Non-Core Real Estate (3.5%) | <p>Enhanced Real Estate/ High Return</p> <ul style="list-style-type: none"> Apollo Real Estate Fund II LP (MCA) Bryanston Retail Opportunity Fortress Japan Opportunity Fund II Kayne Anderson Real Estate Partners V LP (MCA) Morgan Stanley RE Fund V International Oaktree RE Opportunities Fund V PRISA III Starwood Global Opportunity Fund VII-A Walton Street Real Estate Fund V |
| | | <p>Real Estate Secondaries</p> <ul style="list-style-type: none"> Partners Group Real Estate Secondary 2013 A LP (MCA) Partners Group Real Estate Secondary 2017 A LP (MCA) |



REAL ASSETS

| | | |
|--|--------------------------------------|---|
| Real Asset Portfolio (5% Target) | Commodities (2% Target) | Energy Spectrum Partners VI LP Pinnacle Natural Resources LP Pinnacle Physicals & Financing LTD |
| | Infrastructure (1% Target) | Kayne Anderson Acquisition LP (MCA) Kayne Anderson MLP Strategy (MCA) |
| | Timber (2% Target) | Hancock Timberland VIII LP Timbervest Crossover Partners II LP Timbervest Partners II LP |



San Bernardino County Employees' Retirement Association

ALTERNATIVES - NET

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|---|----------------------|----------------|-------------|-----------|----------------|-----------|--------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| Private Equity Composite | 2,159,077,863 | 17.1 | 8.1 | -- | 32.2 | -- | 21.3 | -- | 15.9 | -- | 14.7 | -- | 13.6 | -- |
| <i>C A Global All PE (Qtr Lag)</i> | | | <u>17.3</u> | -- | <u>41.5</u> | -- | <u>28.8</u> | -- | <u>17.3</u> | -- | <u>16.0</u> | -- | <u>13.7</u> | -- |
| Excess Return | | | -9.2 | | -9.3 | | -7.5 | | -1.4 | | -1.3 | | -0.1 | |
| <i>Russell 3000</i> | | | 6.3 | -- | 33.2 | -- | 62.5 | -- | 17.1 | -- | 16.6 | -- | 13.8 | -- |
| <i>C A US All PE (1 Qtr Lag)</i> | | | 13.2 | -- | 36.7 | -- | 22.9 | -- | 15.7 | -- | 15.5 | -- | 14.0 | -- |
| Real Estate Composite | 484,110,766 | 3.8 | 3.2 | 24 | 5.8 | 31 | 3.8 | 38 | 5.9 | 23 | 6.3 | 40 | 8.5 | 76 |
| <i>NCREIF Property Index 1 Qtr. Lag</i> | | | <u>1.2</u> | 78 | <u>0.9</u> | 91 | <u>1.6</u> | 70 | <u>4.9</u> | 52 | <u>5.9</u> | 58 | <u>9.0</u> | 61 |
| Excess Return | | | 2.0 | | 4.9 | | 2.2 | | 1.0 | | 0.4 | | -0.5 | |
| <i>InvMetrics Public DB Real Estate Pub+Priv Net Median</i> | | | 2.4 | | 4.1 | | 2.6 | | 4.9 | | 6.2 | | 9.1 | |
| Real Assets Composite | 466,660,465 | 3.7 | 4.1 | 28 | 20.3 | 21 | 33.7 | 21 | 7.3 | 18 | 5.4 | 29 | 3.5 | 46 |
| <i>Real Assets Custom Blend</i> | | | <u>4.2</u> | 28 | <u>19.7</u> | 21 | <u>25.5</u> | 24 | <u>2.3</u> | 70 | <u>3.3</u> | 75 | <u>-0.4</u> | 83 |
| Excess Return | | | -0.1 | | 0.6 | | 8.2 | | 5.0 | | 2.1 | | 3.9 | |
| <i>67% Bloomberg Commodity/ 33% Barclays US TIPS</i> | | | 4.2 | 28 | 19.7 | 21 | 25.5 | 24 | 2.0 | 79 | 3.0 | 80 | -3.0 | 99 |
| Timber | 32,384,657 | 0.3 | -0.9 | -- | 0.5 | -- | -1.7 | -- | -2.5 | -- | -1.4 | -- | 1.1 | -- |
| <i>NCREIF Timberland 1 Qtr. Lag</i> | | | <u>0.6</u> | -- | <u>0.7</u> | -- | <u>0.8</u> | -- | <u>1.8</u> | -- | <u>2.3</u> | -- | <u>4.6</u> | -- |
| Excess Return | | | -1.5 | | -0.2 | | -2.5 | | -4.3 | | -3.7 | | -3.5 | |
| Infrastructure | 118,565,565 | 0.9 | 12.0 | -- | 61.1 | -- | 118.5 | -- | 8.1 | -- | 12.8 | -- | 5.4 | -- |
| <i>Russell 3000</i> | | | <u>6.3</u> | -- | <u>33.2</u> | -- | <u>62.5</u> | -- | <u>17.1</u> | -- | <u>16.6</u> | -- | <u>13.8</u> | -- |
| Excess Return | | | 5.7 | | 27.9 | | 56.0 | | -9.0 | | -3.8 | | -8.4 | |
| Commodities | 315,710,243 | 2.5 | 1.6 | -- | 7.1 | -- | 12.2 | -- | 11.4 | -- | 6.8 | -- | 4.2 | -- |
| <i>Bloomberg Commodity Index</i> | | | <u>6.9</u> | -- | <u>28.5</u> | -- | <u>35.0</u> | -- | <u>-0.2</u> | -- | <u>2.3</u> | -- | <u>-6.3</u> | -- |
| Excess Return | | | -5.3 | | -21.4 | | -22.8 | | 11.6 | | 4.5 | | 10.5 | |



**APPENDIX:
PRIVATE EQUITY,
REAL ESTATE AND
REAL ASSETS
PERFORMANCE**

NEPC, LLC

REAL ESTATE PERFORMANCE ENDED DECEMBER 31, 2020

| Investment | Vintage Year | Commitment Amount | Paid in Capital | Cumulative Distributions | Valuation | TVPI Ratio | IRR |
|---|--------------|----------------------|----------------------|--------------------------|--------------------|-------------|--------------|
| American Realty Advisors | 1996 | 128,009,773 | 128,009,773 | 278,446,295 | 0 | 2.18 | 6.89% |
| American Realty Value Add* | 2006 | 13,125,215 | 13,125,215 | 32,080,321 | 0 | 2.44 | 10.92% |
| Apollo US Real Estate Fund II | 2015 | 20,000,000 | 14,344,929 | 4,987,840 | 13,035,135 | 1.25 | 8.01% |
| Beacon Capital Strategic Partners IV, L.P. | 2006 | 38,000,000 | 38,000,000 | 31,424,699 | 0 | 0.83 | -3.26% |
| Beacon Capital Strategic Partners V, L.P. | 2007 | 18,000,000 | 18,000,000 | 11,174,695 | 0 | 0.62 | -7.87% |
| BlackRock Diamond Property Fund | 2005 | 25,000,000 | 25,000,000 | 15,233,347 | 0 | 0.61 | -9.31% |
| Bryanston Real Estate Opportunity Fund II, L.P. | 2009 | 20,000,000 | 8,589,256 | 11,847,997 | 0 | 1.38 | 10.19% |
| Bryanston Retail Opportunity Fund, L.P. | 2004 | 20,000,000 | 8,228,165 | 22,266,489 | 10,942,767 | 4.04 | 70.76% |
| CBRE Strategic Partners III | 2003 | 10,000,000 | 10,000,000 | 12,698,783 | 0 | 1.27 | 8.02% |
| CBRE Strategic Partners IV | 2005 | 40,000,000 | 40,000,000 | 2,609,685 | 0 | 0.07 | -27.76% |
| Fillmore East Fund | 2006 | 25,000,000 | 31,403,818 | 20,777,177 | 0 | 0.66 | -9.78% |
| Fillmore West Fund | 2008 | 20,000,000 | 19,561,557 | 21,175,799 | 0 | 1.08 | 1.14% |
| Fortress Japan Opportunity Fund II | 2012 | 21,739,130 | 2,434,589 | 23,188,365 | 3,794,267 | 9.97 | 25.70% |
| Invesco Asian Real Estate Partners II (USD), LP | 2007 | 20,000,000 | 8,412,833 | 11,465,147 | 0 | 1.36 | 7.52% |
| Invesco High Yield Debt Fund I | 2007 | 20,000,000 | 20,000,000 | 8,567,605 | 0 | 0.43 | -35.57% |
| Invesco Real Estate Asia Fund | 2014 | 51,732,500 | 51,732,500 | 13,025,718 | 70,230,619 | 1.54 | 7.73% |
| INVESCO Real Estate Fund I | 2005 | 10,000,000 | 9,248,390 | 10,015,656 | 0 | 1.08 | 1.54% |
| Kayne Anderson Real Estate Debt III | 2018 | 20,000,000 | 19,828,428 | 5,790,674 | 16,614,641 | 1.13 | 10.13% |
| Kayne Anderson Real Estate Partners V | 2017 | 20,000,000 | 14,800,000 | 852,243 | 18,735,709 | 1.34 | 16.52% |
| LaSalle Income & Growth Fund IV | 2005 | 20,000,000 | 19,469,417 | 13,482,024 | 0 | 0.69 | -5.51% |
| North Haven Real Estate Fund V International | 2005 | 27,500,000 | 27,377,414 | 32,070,486 | 1,252,689 | 1.21 | 6.88% |
| Oaktree Real Estate Opportunities V | 2012 | 25,000,000 | 25,000,000 | 38,093,074 | 1,737,883 | 1.56 | 12.89% |
| Partners Group RE Secondary 2013 (USD) A | 2014 | 65,000,000 | 49,541,590 | 24,769,953 | 43,695,141 | 1.39 | 9.85% |
| Partners Group RE Secondary 2017 (USD) A | 2017 | 75,000,000 | 36,437,810 | 118,130 | 42,550,785 | 1.17 | 8.42% |
| Pramerica Real Estate Capital VI | 2016 | 25,252,398 | 23,722,781 | 8,232,815 | 13,920,568 | 0.93 | -4.60% |
| Prologis Japan Fund | 2005 | 25,290,819 | 25,290,819 | 33,126,118 | 0 | 1.31 | 4.81% |
| Prudential PRISA II | 2004 | 140,000,000 | 140,000,000 | 54,309,041 | 166,699,053 | 1.51 | 7.11% |
| Prudential PRISA III | 2003 | 75,000,000 | 61,852,541 | 52,975,094 | 59,685,391 | 1.72 | 17.26% |
| RREEF America REIT III | 2004 | 20,000,000 | 20,539,309 | 23,658,675 | 0 | 1.15 | 3.00% |
| Square Mile Partners II | 2007 | 19,831,232 | 19,831,232 | 5,311,330 | 0 | 0.27 | -19.11% |
| Square Mile Partners III LP | 2008 | 20,000,000 | 19,730,190 | 28,756,613 | 51,093 | 1.46 | 11.50% |
| Starwood Capital Hospitality Fund I-2 | 2006 | 30,000,000 | 30,000,000 | 27,879,087 | 2,480,825 | 1.01 | 0.16% |
| Starwood Debt Fund II, LP | 2008 | 20,000,000 | 17,599,882 | 21,912,511 | 0 | 1.25 | 6.45% |
| Starwood Opportunity Fund VII - A | 2006 | 25,000,000 | 25,000,000 | 19,517,190 | 635,498 | 0.81 | -2.34% |
| Structured Real Estate III, LP (Guggenheim) | 2008 | 20,000,000 | 20,000,000 | 16,320,664 | 0 | 0.82 | -4.99% |
| Tri Continental Capital VII | 2005 | 23,000,000 | 22,277,928 | 3,075,156 | 429,275 | 0.16 | -15.72% |
| Tuckerman Multi-Family Development Fund III | 2002 | 10,000,000 | 10,219,311 | 16,939,699 | 0 | 1.66 | 26.67% |
| Walton Street Real Estate Fund IV, LP | 2003 | 10,000,000 | 9,770,890 | 15,939,604 | 69,287 | 1.64 | 10.72% |
| Walton Street Real Estate Fund V, LP | 2006 | 40,000,000 | 40,000,000 | 26,758,768 | 2,746,840 | 0.74 | -3.31% |
| Subtotal: San Bernardino | | 1,256,481,068 | 1,124,380,567 | 1,000,874,569 | 469,307,466 | 1.29 | 4.11% |

Note: All metrics are calculated since inception

* Denotes cash adjusted



REAL ASSETS PERFORMANCE ENDED DECEMBER 31, 2020

| Investment | Vintage Year | Commitment Amount | Paid in Capital | Cumulative Distributions | Valuation | TVPI Ratio | IRR |
|--|--------------|--------------------|--------------------|--------------------------|-------------------|-------------|---------------|
| Fortress Transportation Infrastructure LLC | 2015 | 45,403,354 | 45,403,354 | 16,745,828 | 34,693,510 | 1.13 | -31.25% |
| Hancock Timberland VII | 2005 | 90,000,000 | 90,000,000 | 101,142,900 | 0 | 1.12 | 1.02% |
| Hancock Timberland VIII | 2006 | 40,000,000 | 40,000,000 | 20,771,925 | 19,722,398 | 1.01 | 0.11% |
| Highstar Capital III, L.P.* | 2007 | 60,000,000 | 59,119,119 | 62,905,543 | 414,302 | 1.07 | 0.87% |
| Timbervest Crossover Partners II, L.P. | 2008 | 30,000,000 | 30,000,000 | 17,174,831 | 10,935,614 | 0.94 | -0.91% |
| Timbervest Partners II, L.P. | 2007 | 50,000,000 | 50,000,000 | 48,475,000 | 3,970,528 | 1.05 | 0.50% |
| Subtotal: San Bernardino | | 315,403,354 | 314,522,473 | 267,216,027 | 69,736,352 | 1.07 | -0.45% |

Note: All metrics are calculated since inception

** Denotes cash adjusted*



PRIVATE EQUITY PERFORMANCE ENDED DECEMBER 31, 2020

| Investment | Vintage Year | Commitment Amount | Paid in Capital | Capital to be Funded | Cumulative Distributions | Valuation | TVPI Ratio | IRR |
|--|--------------|-------------------|-----------------|----------------------|--------------------------|------------|------------|---------|
| Adams Street SBCERA | 2020 | 50,000,000 | 15,200,000 | 34,800,000 | 578,554 | 21,676,840 | 1.46 | 65.45% |
| Apollo Accord Fund, LP | 2017 | 30,000,000 | 7,500,000 | 22,500,000 | 8,310,474 | 0 | 1.11 | 7.44% |
| Apollo European Principal Finance Fund (Feeder), LP* | 2009 | 54,500,195 | 46,434,825 | 8,065,370 | 69,228,391 | 262,541 | 1.50 | 11.81% |
| Apollo Investment Fund VII, L.P. | 2008 | 10,000,000 | 8,782,319 | 1,217,681 | 16,340,334 | 907,500 | 1.97 | 22.56% |
| Apollo PCPL Webb V | 2010 | 4,844,398 | 4,844,398 | 0 | 5,196,757 | 0 | 1.07 | 6.04% |
| Apollo PCPL Webb VIII | 2010 | 4,734,303 | 4,734,303 | 0 | 12,146,258 | 0 | 2.57 | 46.47% |
| ARES European Loan Opp Fund | 2015 | 15,000,000 | 8,413,136 | 0 | 7,613,498 | 0 | 0.90 | -6.02% |
| Ares Special Situations Fund IV, LP | 2015 | 50,000,000 | 47,686,469 | 2,313,531 | 4,788,063 | 47,132,214 | 1.09 | 2.38% |
| Aurora Equity Partners III, L.P. | 2005 | 25,000,000 | 23,544,536 | 0 | 41,738,196 | 0 | 1.67 | 13.61% |
| Aurora Equity Partners IV, L.P. | 2012 | 20,000,000 | 17,262,661 | 2,737,339 | 36,905,236 | 3,783,840 | 2.04 | 18.56% |
| Aurora Resurgence Fund, L.P. | 2008 | 15,000,000 | 5,653,009 | 0 | 10,350,965 | 0 | 1.82 | 17.60% |
| BNY Mellon - Alcentra Mezzanine III | 2012 | 25,000,000 | 23,254,658 | 0 | 26,736,979 | 0 | 1.15 | 12.73% |
| Catalyst Fund II, L.P.* | 2007 | 10,000,000 | 10,356,944 | -356,944 | 4,259,103 | 18,358,035 | 2.17 | 8.80% |
| Crestline Portfolio Financing Fund | 2018 | 50,000,000 | 36,161,186 | 13,838,814 | 1,837,918 | 40,582,374 | 1.17 | 11.51% |
| DRI II, L.P. | 2009 | 20,000,000 | 19,917,669 | 0 | 26,302,807 | 0 | 1.33 | 19.64% |
| European Strategic Partners 2004* | 2004 | 242,567,195 | 221,308,426 | 21,258,768 | 276,628,908 | 4,755,994 | 1.27 | 4.00% |
| European Strategic Partners 2008* | 2010 | 31,609,947 | 29,248,393 | 2,361,554 | 32,245,993 | 11,007,380 | 1.47 | 8.75% |
| Industry Ventures Direct II, LP* | 2019 | 50,000,000 | 13,996,132 | 36,003,868 | 0 | 12,981,227 | 0.93 | -12.14% |
| Industry Ventures Direct, LP* | 2016 | 25,000,000 | 21,094,952 | 3,905,048 | 1,917,517 | 27,386,723 | 1.39 | 14.22% |
| Industry Ventures Fund V* | 2008 | 10,000,000 | 9,500,000 | 500,000 | 27,196,010 | 245,825 | 2.89 | 29.32% |
| Industry Ventures Fund VI* | 2011 | 20,000,000 | 18,400,000 | 1,600,000 | 20,400,016 | 4,510,141 | 1.35 | 7.92% |
| Industry Ventures Partnership Holdings Fund II, L.P.* | 2012 | 25,000,000 | 23,500,000 | 1,500,000 | 28,124,148 | 49,715,177 | 3.31 | 22.25% |
| Industry Ventures Partnership Holdings Fund III, L.P.* | 2013 | 25,000,000 | 23,277,042 | 1,722,958 | 20,754,764 | 40,251,759 | 2.62 | 23.27% |
| Industry Ventures Partnership Holdings Fund III-A, L.P.* | 2014 | 12,500,000 | 11,087,500 | 1,412,500 | 6,369,499 | 5,555,036 | 1.08 | 1.90% |
| Industry Ventures Partnership Holdings IV, LP* | 2016 | 25,000,000 | 19,350,000 | 5,650,000 | 1,419,332 | 26,214,457 | 1.43 | 15.67% |
| Industry Ventures Partnership Holdings V, LP* | 2018 | 25,000,000 | 10,750,000 | 14,250,000 | 158,849 | 12,019,985 | 1.13 | 12.98% |
| Industry Ventures Secondary VII, L.P.* | 2013 | 25,000,000 | 22,925,000 | 2,075,000 | 24,336,431 | 14,660,024 | 1.70 | 14.78% |
| Industry Ventures Secondary VIII* | 2017 | 25,000,000 | 21,750,000 | 3,250,000 | 7,561,030 | 28,944,582 | 1.68 | 41.90% |
| Industry Ventures Special Opportunities II-A* | 2016 | 12,500,000 | 1,530,722 | 10,969,278 | 745,354 | 2,341,701 | 2.02 | 44.04% |
| Industry Ventures Tech Buyout LP* | 2018 | 50,000,000 | 9,361,745 | 40,638,255 | 0 | 8,995,405 | 0.96 | -3.27% |
| Kayne Anderson Energy Fund VII, L.P. | 2017 | 10,000,000 | 8,614,431 | 1,385,569 | 215,495 | 2,594,103 | 0.33 | -33.34% |
| Kayne Anderson FRG | 2020 | 30,000,000 | 30,000,000 | 0 | 2,640,233 | 35,891,371 | 1.28 | 30.32% |
| Kayne Anderson Private Energy Income Fund II, L.P. | 2018 | 20,000,000 | 3,880,000 | 16,120,000 | 1,538,826 | 5,985,063 | 1.94 | 43.64% |
| Kayne CLO Partners II, LP | 2020 | 50,000,000 | 31,686,290 | 18,313,710 | 3,846,221 | 35,027,339 | 1.23 | 30.85% |

Note: All metrics are calculated since inception

* Denotes Cash adjusted value



PRIVATE EQUITY PERFORMANCE ENDED DECEMBER 31, 2020

| Investment | Vintage Year | Commitment Amount | Paid in Capital | Capital to be Funded | Cumulative Distributions | Valuation | TVPI Ratio | IRR |
|---|--------------|----------------------|----------------------|----------------------|--------------------------|----------------------|-------------|--------------|
| Kayne Flywheel Co-investment LLC | 2018 | 8,000,000 | 6,400,000 | 1,600,000 | 2,750,114 | 11,523,711 | 2.23 | 52.29% |
| Kayne Partners Fund IV (QP), LP | 2017 | 20,000,000 | 16,388,054 | 3,611,946 | 0 | 22,701,237 | 1.38 | 17.30% |
| Kayne Renewable Opportunities Partners (TE), LP | 2019 | 100,000,000 | 11,424,903 | 88,575,097 | 0 | 12,750,975 | 1.12 | 5.92% |
| Kayne SBCERA (D.I.) | 2018 | 45,000,000 | 40,660,422 | 4,339,578 | 38,704,064 | 12,734,601 | 1.27 | 25.71% |
| Kayne SBCERA MLP | 2017 | 130,000,000 | 126,225,037 | 3,774,963 | 1,258,367 | 101,941,401 | 0.82 | -6.70% |
| Kayne Solutions Fund LP | 2018 | 20,000,000 | 7,513,180 | 12,486,820 | 6,994,228 | 6,036,758 | 1.73 | 39.35% |
| Lexington Capital Partners VI-B | 2006 | 25,000,000 | 24,591,319 | 408,681 | 33,645,454 | 1,408,814 | 1.43 | 6.87% |
| Lexington Capital Partners VII (Offshore) | 2011 | 25,000,000 | 20,409,757 | 4,590,243 | 28,021,640 | 4,971,327 | 1.61 | 14.56% |
| Lexington Middle Market I | 2005 | 25,000,000 | 24,771,942 | 228,058 | 38,288,493 | 2,212,753 | 1.63 | 11.44% |
| Lexington Middle Market II - Offshore | 2008 | 10,000,000 | 9,773,736 | 226,264 | 14,331,190 | 2,576,098 | 1.72 | 14.16% |
| NB Secondary Opportunities I, LP | 2005 | 20,000,000 | 18,500,843 | 0 | 24,330,105 | 0 | 1.32 | 6.49% |
| NB Secondary Opportunities II, LP | 2008 | 20,000,000 | 17,080,642 | 0 | 26,888,038 | 0 | 1.54 | 14.40% |
| Partners Group Access 773, L.P. | 2019 | 9,127,941 | 0 | 9,127,941 | 0 | 0 | 0.00 | N/A |
| Partners Group MCA | 2004 | 800,000,000 | 788,146,351 | 11,853,649 | 618,682,542 | 531,883,314 | 1.46 | 8.49% |
| Pathway Private Equity Fund VII, L.P. | 2004 | 904,500,000 | 854,837,375 | 49,662,625 | 1,245,710,065 | 360,167,476 | 1.88 | 11.58% |
| Pathway SBCERA MCA | 2014 | 250,000,000 | 214,752,565 | 35,247,435 | 21,289,500 | 436,044,858 | 2.13 | 23.24% |
| Siguler Guff DOF II | 2006 | 30,000,000 | 30,000,000 | 0 | 42,440,278 | 0 | 1.42 | 8.64% |
| Siguler Guff DOF III | 2008 | 10,000,000 | 9,700,000 | 300,000 | 14,197,418 | 1,856,603 | 1.66 | 10.81% |
| SL Capital SOF I LP* | 2014 | 25,000,000 | 21,255,777 | 3,744,223 | 21,716,907 | 7,072,617 | 1.35 | 10.14% |
| SL Capital SOF III LP | 2017 | 25,000,000 | 16,337,535 | 8,662,465 | 2,458,882 | 22,108,983 | 1.50 | 24.79% |
| TCP Direct Lending Fund VIII-L, LLC* | 2016 | 40,000,000 | 35,477,991 | 4,522,009 | 6,082,812 | 34,490,618 | 1.14 | 5.76% |
| TCW/Crescent Mezzanine IV, L.P. | 2006 | 40,000,000 | 39,590,976 | 409,024 | 45,049,090 | 0 | 1.14 | 3.03% |
| TCW/Crescent Mezzanine V, L.P. | 2008 | 20,000,000 | 20,291,044 | -291,044 | 26,329,620 | 1,582,412 | 1.38 | 9.94% |
| Tennenbaum Energy Opportunities Fund, LP | 2016 | 20,000,000 | 9,670,678 | 10,329,322 | 6,078,949 | 7,576,133 | 1.41 | 9.36% |
| Tennenbaum Opportunities Fund V, L.P. | 2007 | 10,000,000 | 10,000,000 | 0 | 11,971,906 | 2,037,448 | 1.40 | 4.94% |
| Tennenbaum Opportunities Fund VI, L.P. | 2011 | 20,000,000 | 9,501,887 | 10,498,113 | 11,286,373 | 6,707,510 | 1.89 | 8.13% |
| Tennenbaum Special Situations Fund IX* | 2015 | 50,000,000 | 36,349,480 | 13,650,520 | 16,193,163 | 39,252,550 | 1.52 | 12.59% |
| Tennenbaum Waterman Fund, LP | 2012 | 70,000,000 | 70,000,000 | 0 | 56,821,234 | 68,289,128 | 1.79 | 11.23% |
| Waterfall Sentinel Co-Investments | 2019 | 30,000,000 | 26,710,053 | 3,289,948 | 0 | 34,024,211 | 1.27 | 21.56% |
| Waterfall Sentinel Fund | 2019 | 30,000,000 | 22,790,239 | 7,209,761 | 299,606 | 26,233,010 | 1.16 | 13.18% |
| Subtotal: San Bernardino | | 3,929,883,978 | 3,350,158,529 | 556,089,943 | 3,090,252,196 | 2,219,971,182 | 1.58 | 8.31% |

Note: All metrics are calculated since inception. * Denotes Cash adjusted value

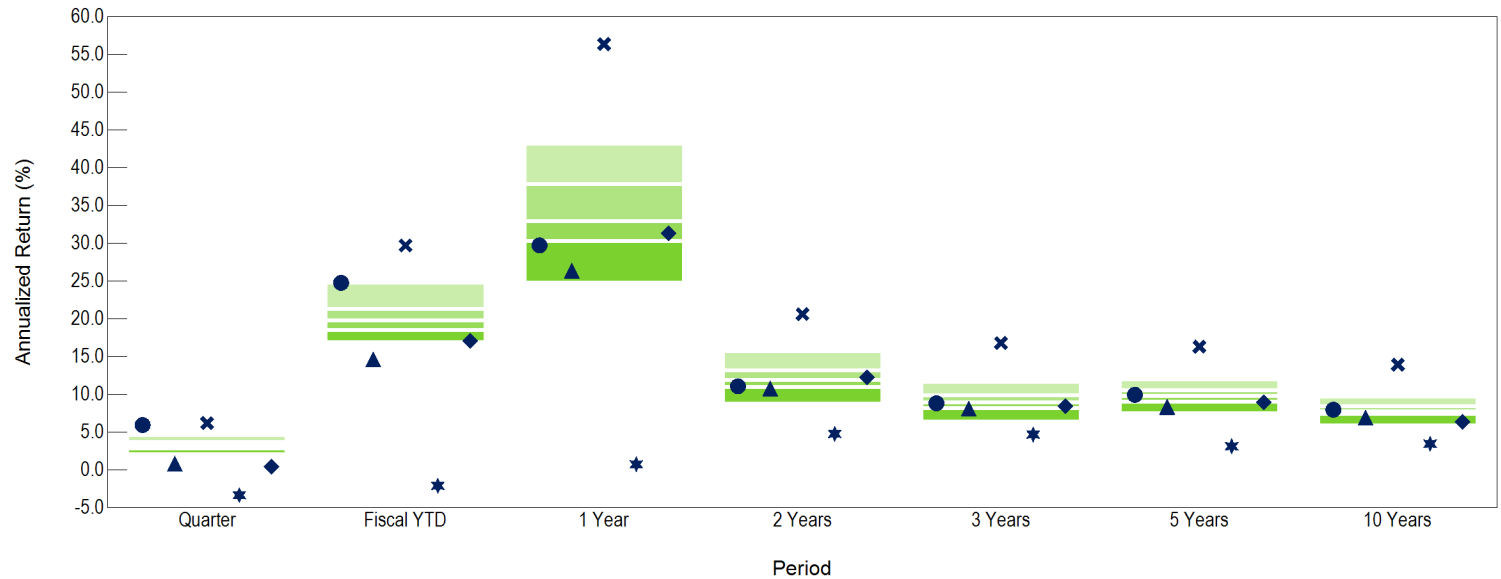


APPENDIX MARKET OUTLOOK

NEPC, LLC

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

Total Fund vs. InvMetrics Public DB > \$1B Net



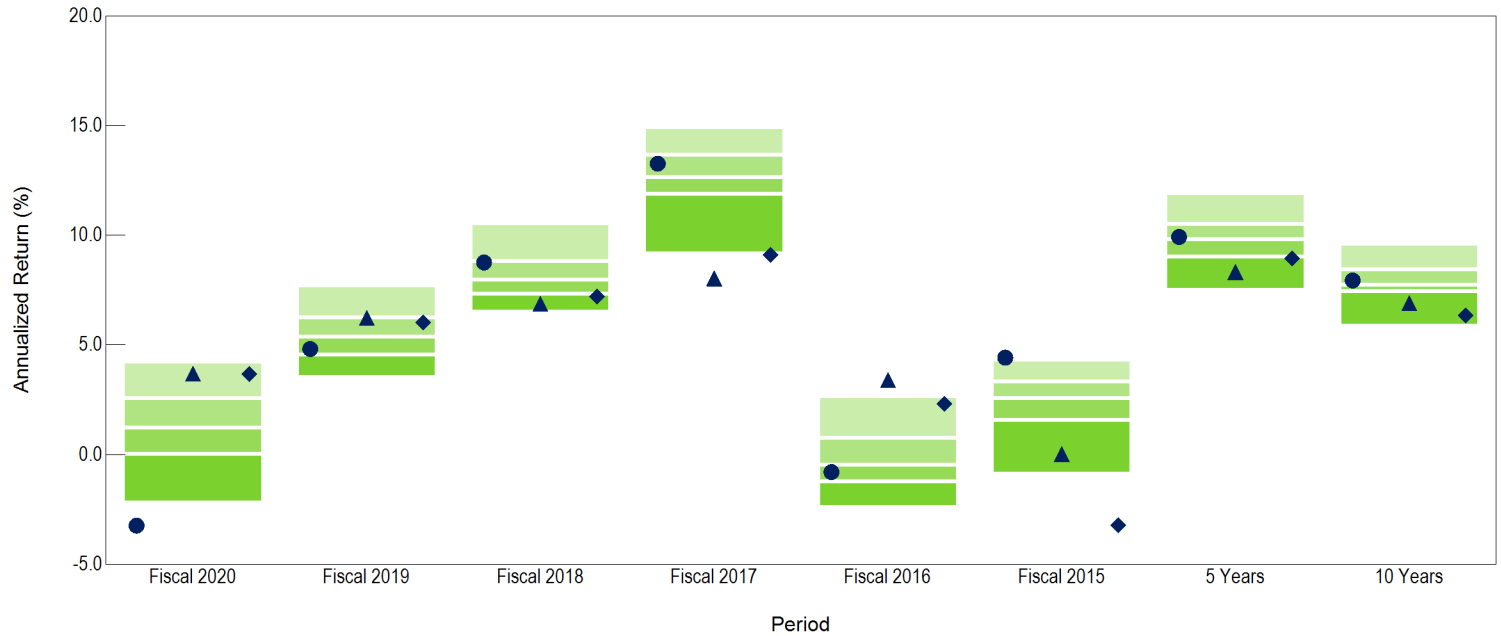
| | Return (Rank) | | | | | | | | | | | |
|---------------------------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|
| 5th Percentile | 4.5 | | 24.7 | | 43.1 | | 15.7 | | 11.6 | | 11.9 | |
| 25th Percentile | 3.7 | | 21.4 | | 37.9 | | 13.2 | | 9.9 | | 10.5 | |
| Median | 3.3 | | 19.8 | | 33.0 | | 11.9 | | 8.9 | | 9.8 | |
| 75th Percentile | 2.9 | | 18.5 | | 30.3 | | 11.0 | | 8.2 | | 9.1 | |
| 95th Percentile | 2.1 | | 17.0 | | 24.8 | | 8.8 | | 6.4 | | 7.5 | |
| # of Portfolios | 38 | | 38 | | 38 | | 38 | | 38 | | 38 | |
| ● Total Fund | 5.9 | (1) | 24.7 | (3) | 29.7 | (78) | 11.0 | (74) | 8.8 | (63) | 9.9 | (46) |
| ▲ Policy Index | 0.8 | (99) | 14.6 | (99) | 26.4 | (92) | 10.8 | (80) | 8.1 | (81) | 8.3 | (92) |
| × S&P 500 | 6.2 | (1) | 29.7 | (1) | 56.4 | (1) | 20.6 | (1) | 16.8 | (1) | 16.3 | (1) |
| * BBgBarc US Aggregate TR | -3.4 | (99) | -2.1 | (99) | 0.7 | (99) | 4.7 | (99) | 4.7 | (99) | 3.1 | (99) |
| ◆ 60% MSCI ACWI (Net) / 40% FTSE WGBI | 0.4 | (99) | 17.1 | (95) | 31.3 | (62) | 12.2 | (42) | 8.4 | (71) | 8.9 | (78) |



San Bernardino County Employees' Retirement Association

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

Total Fund vs. InvMetrics Public DB > \$1B Net



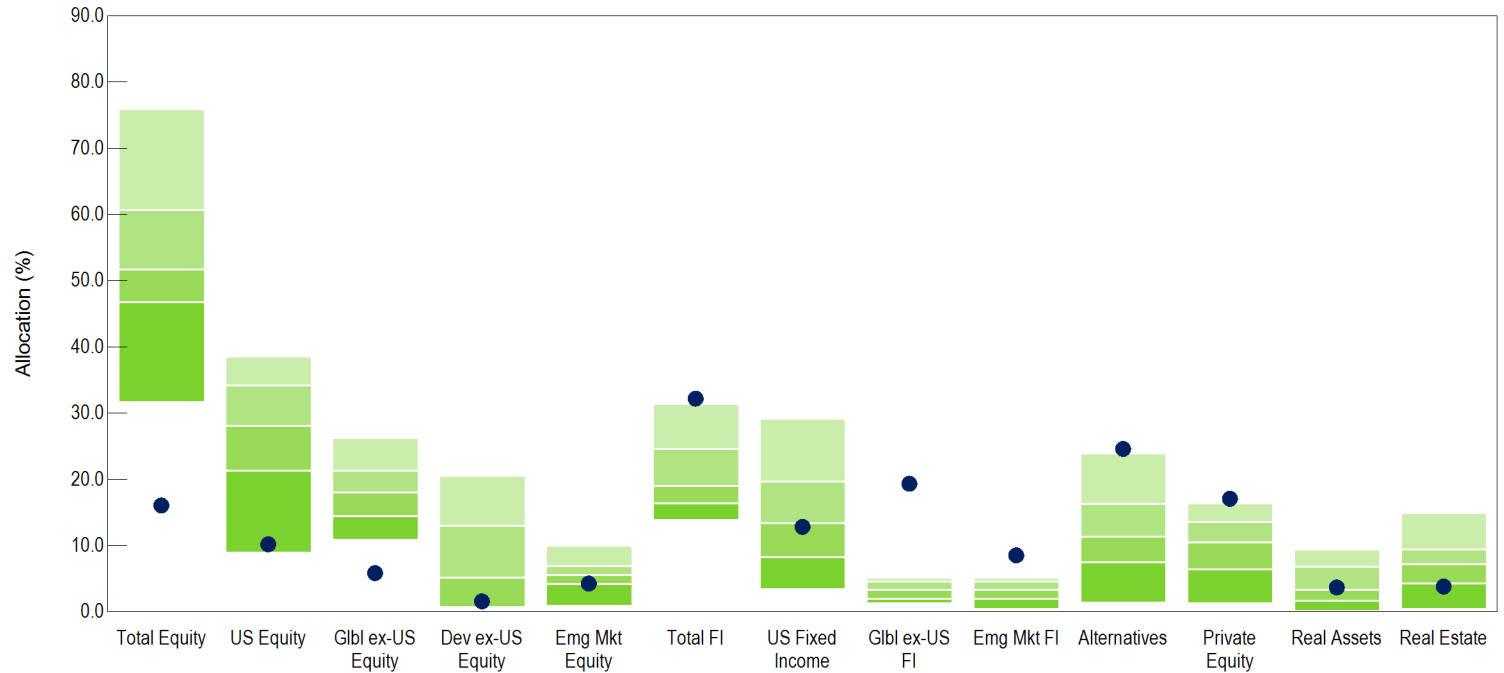
| | Return (Rank) | | | | | | | |
|---------------------------------------|---------------|-------------|-------------|-------------|-------------|-------------|----------|----------|
| | Fiscal 2020 | Fiscal 2019 | Fiscal 2018 | Fiscal 2017 | Fiscal 2016 | Fiscal 2015 | 5 Years | 10 Years |
| 5th Percentile | 4.2 | 7.7 | 10.5 | 14.9 | 2.7 | 4.3 | 11.9 | 9.6 |
| 25th Percentile | 2.6 | 6.3 | 8.8 | 13.7 | 0.8 | 3.3 | 10.5 | 8.5 |
| Median | 1.3 | 5.4 | 8.0 | 12.7 | -0.5 | 2.6 | 9.8 | 7.8 |
| 75th Percentile | 0.0 | 4.6 | 7.3 | 11.9 | -1.2 | 1.6 | 9.1 | 7.5 |
| 95th Percentile | -2.2 | 3.5 | 6.5 | 9.2 | -2.4 | -0.9 | 7.5 | 5.9 |
| # of Portfolios | 71 | 77 | 51 | 65 | 55 | 53 | 38 | 33 |
| ● Total Fund | -3.2 (98) | 4.8 (69) | 8.8 (29) | 13.3 (33) | -0.8 (66) | 4.4 (2) | 9.9 (46) | 7.9 (46) |
| ▲ Policy Index | 3.7 (14) | 6.2 (27) | 6.9 (91) | 8.0 (96) | 3.4 (1) | 0.0 (93) | 8.3 (92) | 6.9 (86) |
| ◆ 60% MSCI ACWI (Net) / 40% FTSE WGBI | 3.7 (14) | 6.0 (31) | 7.2 (79) | 9.1 (96) | 2.3 (8) | -3.2 (99) | 8.9 (78) | 6.3 (92) |



San Bernardino County Employees' Retirement Association

TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE

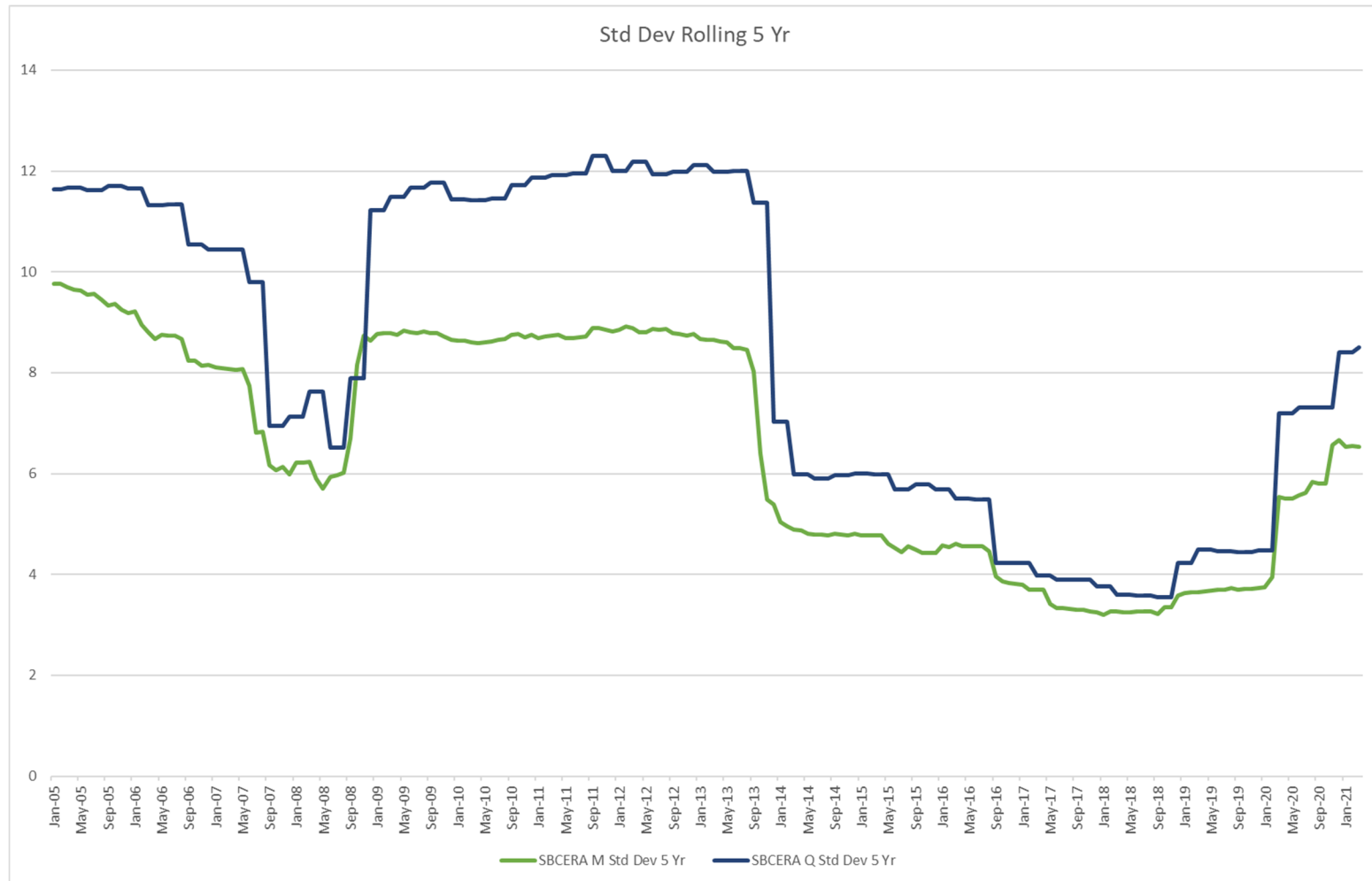
Total Plan Allocation vs. InvMetrics Public DB > \$1B Net



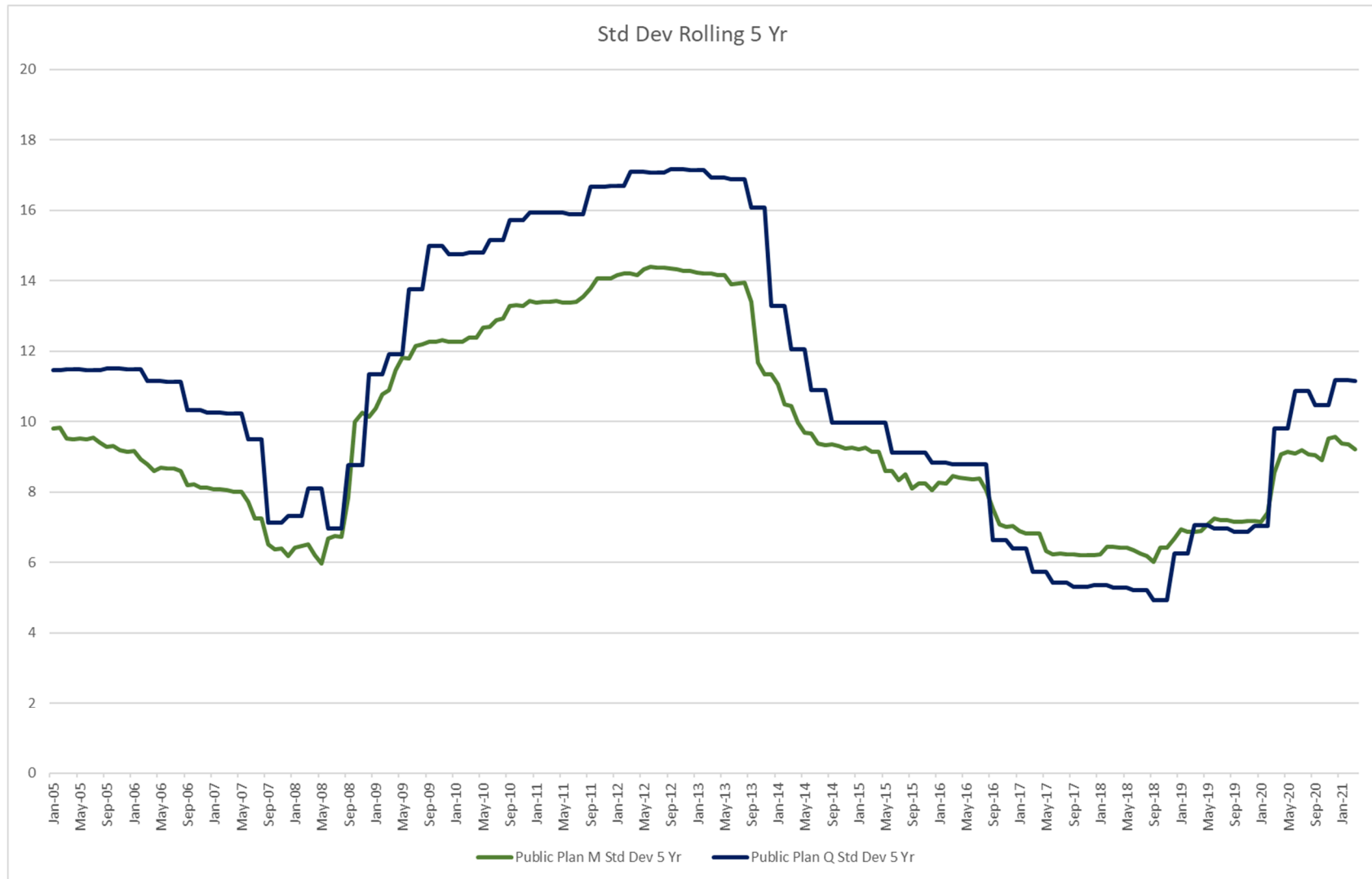
| | Allocation (Rank) | | | | | | | | | | | | | |
|-----------------|-------------------|-----------|----------|----------|----------|----------|-----------|----------|---------|----------|----------|----------|----------|----|
| 5th Percentile | 75.8 | 38.6 | 26.2 | 20.5 | 10.0 | 31.4 | 29.1 | 5.2 | 5.2 | 23.9 | 16.4 | 9.4 | 15.0 | -- |
| 25th Percentile | 60.8 | 34.3 | 21.5 | 13.1 | 7.0 | 24.7 | 19.8 | 4.7 | 4.7 | 16.4 | 13.6 | 6.9 | 9.5 | -- |
| Median | 51.8 | 28.2 | 18.2 | 5.3 | 5.7 | 19.1 | 13.5 | 3.5 | 3.5 | 11.5 | 10.6 | 3.4 | 7.3 | -- |
| 75th Percentile | 46.8 | 21.4 | 14.6 | 0.8 | 4.3 | 16.5 | 8.3 | 2.1 | 2.1 | 7.5 | 6.5 | 1.8 | 4.4 | -- |
| 95th Percentile | 31.8 | 9.0 | 10.9 | 0.7 | 1.0 | 14.0 | 3.5 | 1.4 | 0.6 | 1.5 | 1.4 | 0.3 | 0.6 | -- |
| # of Portfolios | 27 | 18 | 23 | 13 | 19 | 27 | 17 | 10 | 10 | 25 | 21 | 12 | 23 | -- |
| • Total Fund | 16.1 (99) | 10.2 (94) | 5.9 (99) | 1.6 (67) | 4.3 (75) | 32.2 (5) | 12.8 (57) | 19.4 (1) | 8.5 (1) | 24.6 (5) | 17.1 (5) | 3.7 (47) | 3.8 (79) | -- |



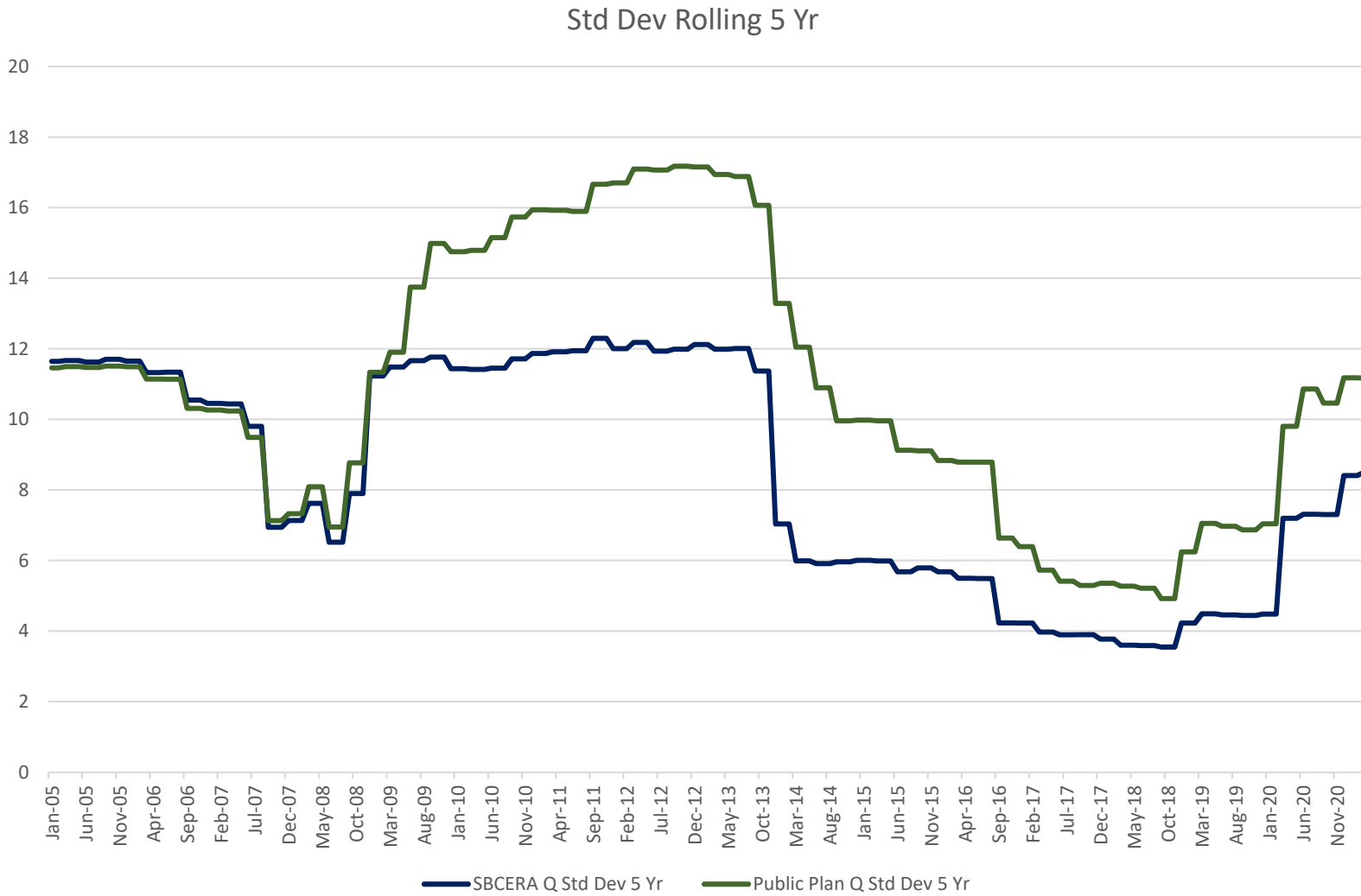
STANDARD DEVIATION COMPARISON: SBCERA



STANDARD DEVIATION COMPARISON: SAMPLE PUBLIC FUND



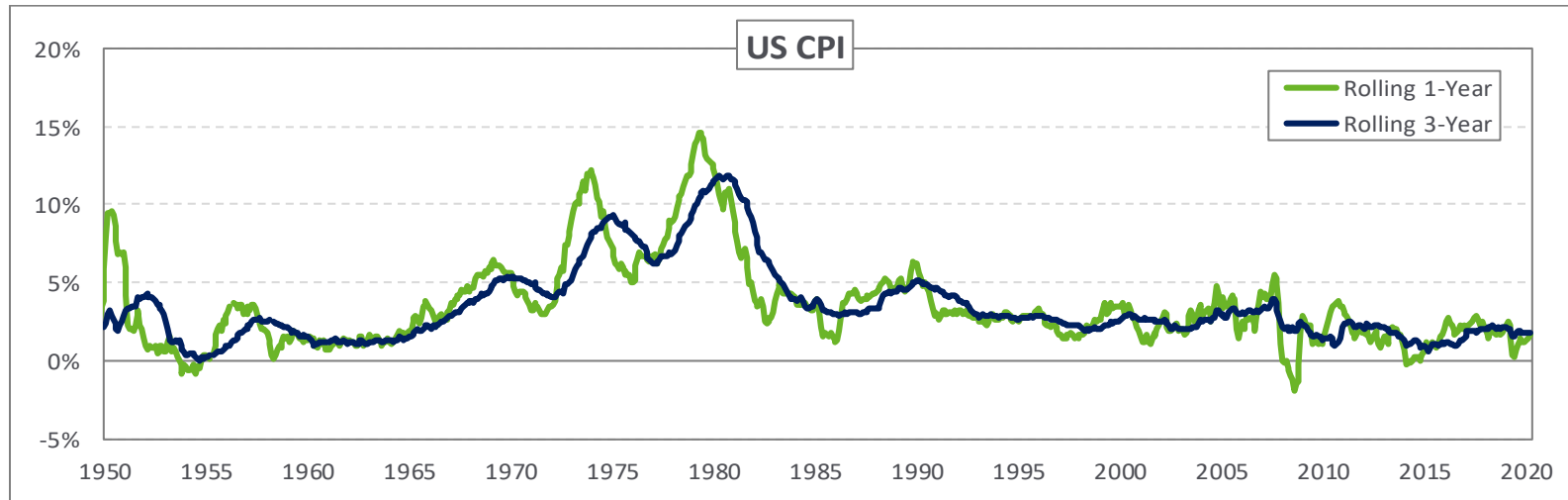
STANDARD DEVIATION COMPARISON: QUARTERLY



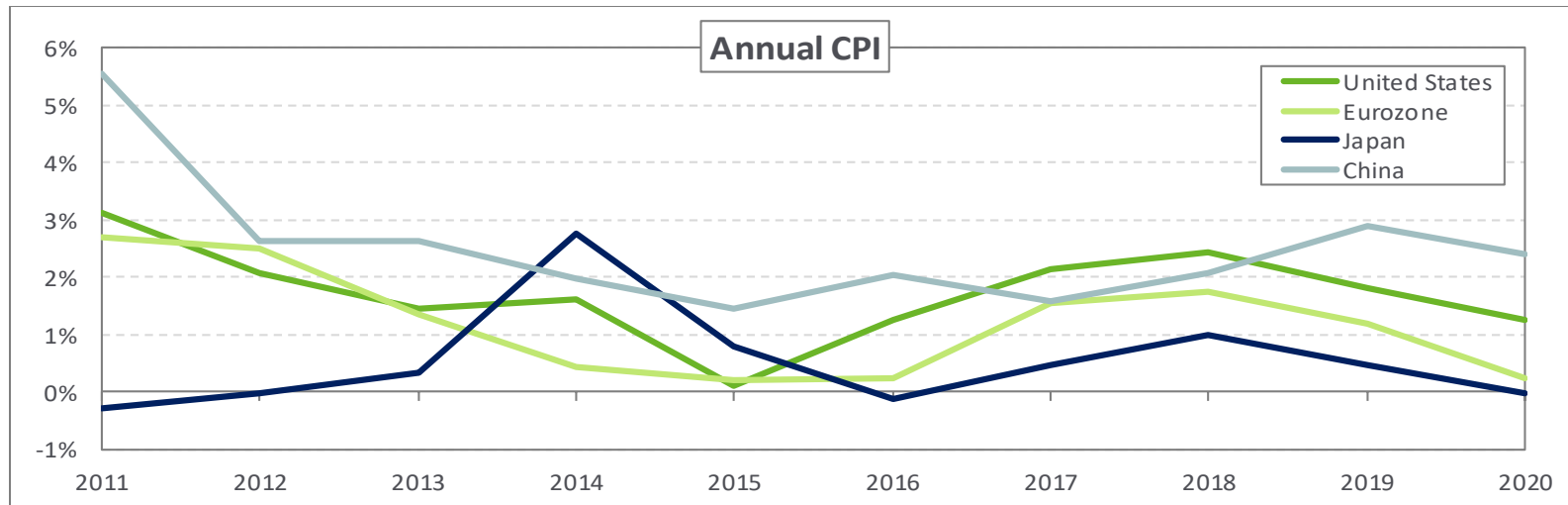
MACRO

NEPC, LLC

INFLATION



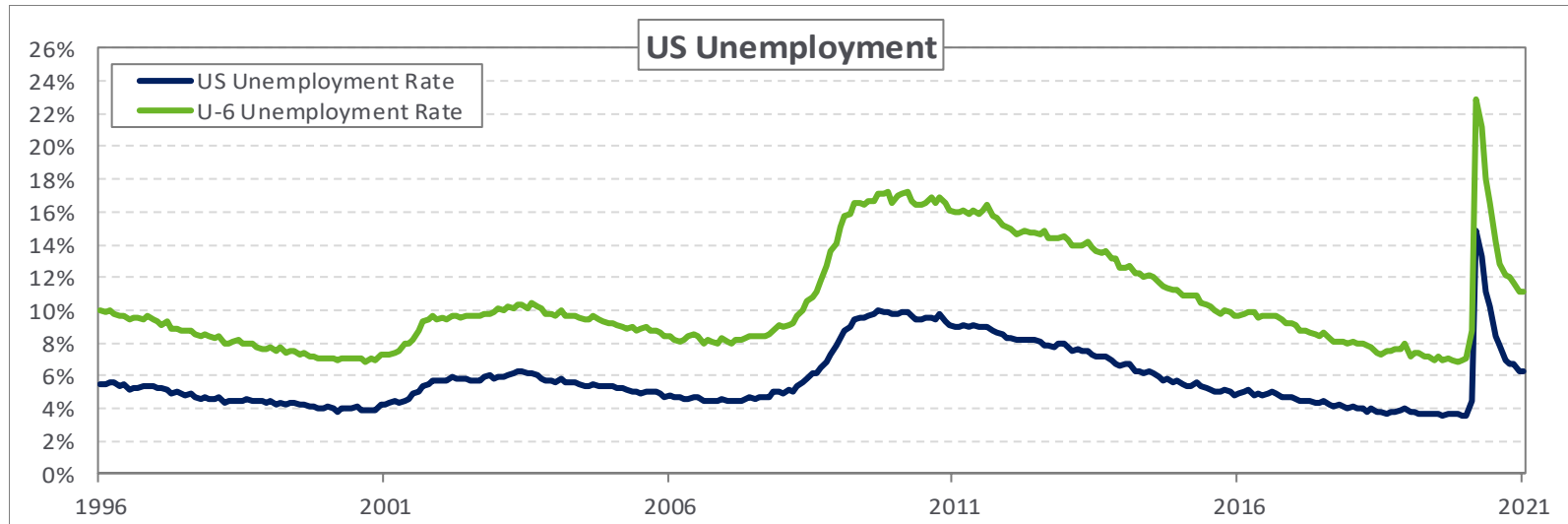
Source: Bureau of Labor Statistics, FactSet



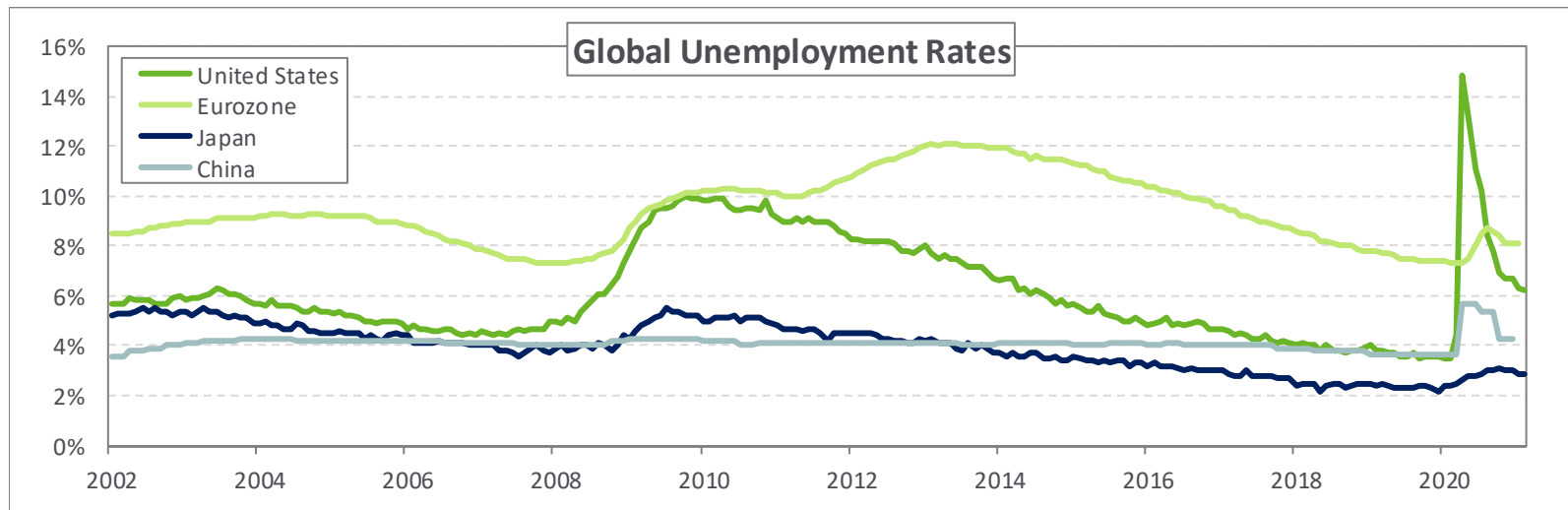
Source: FactSet



UNEMPLOYMENT



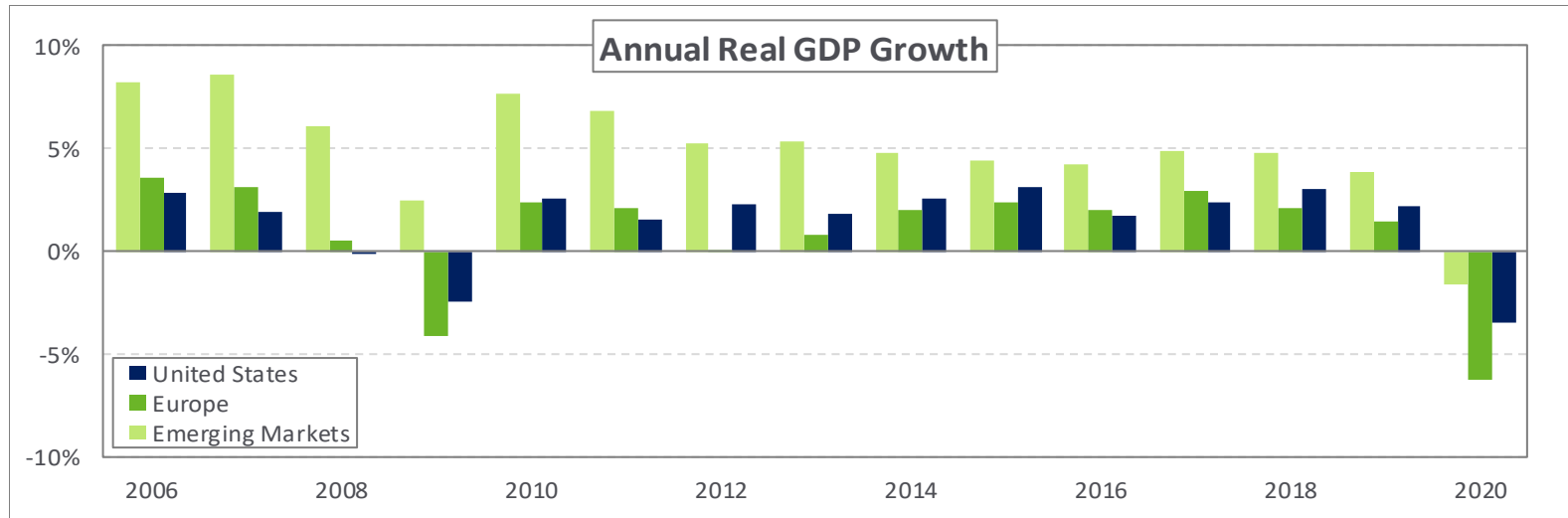
Source: FactSet



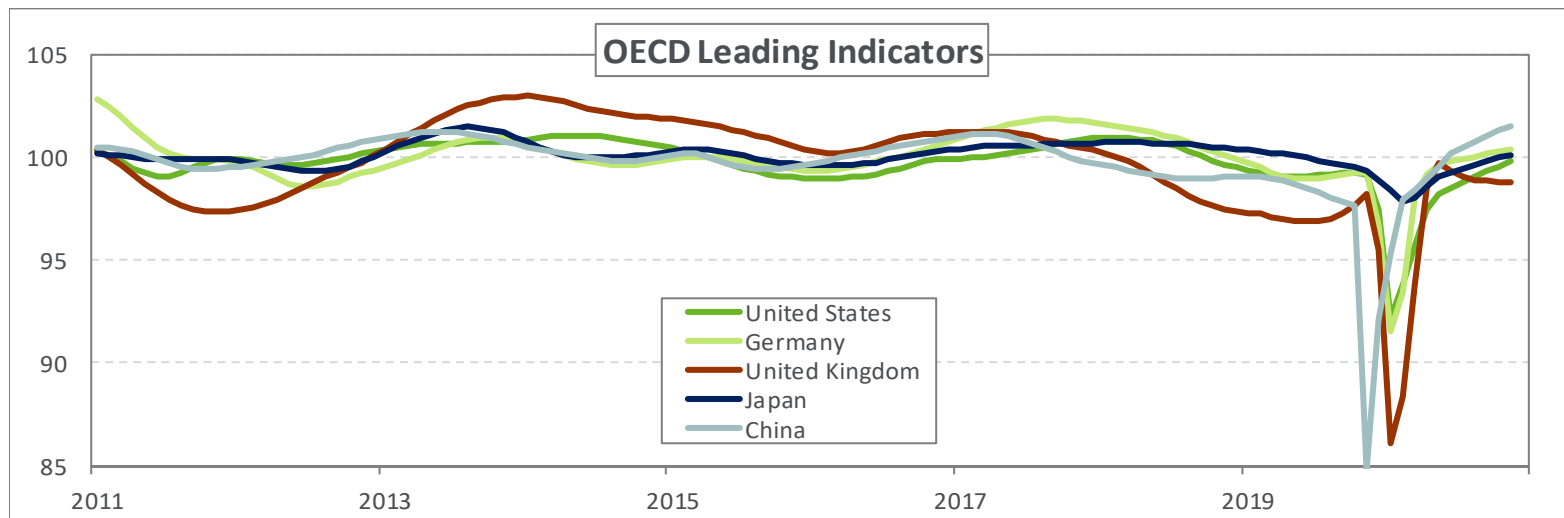
Source: FactSet



ECONOMIC INDICATORS



Source: Bureau of Economic Analysis, Oxford Economics, FactSet



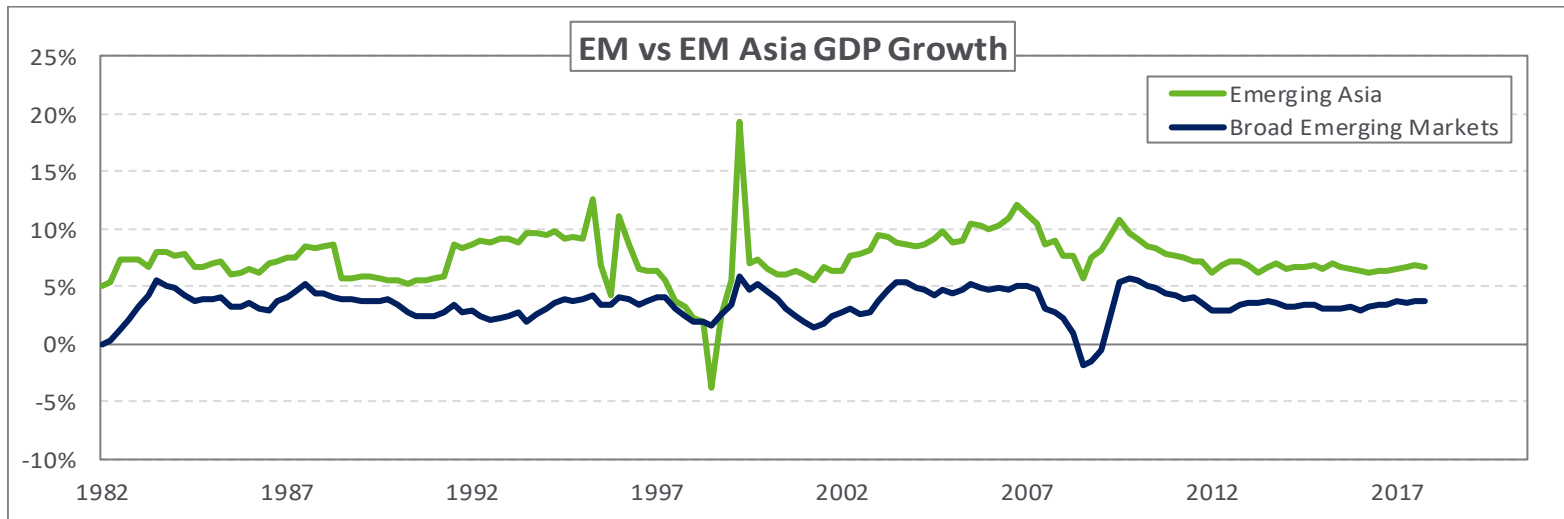
Source: OECD, FactSet



GROSS DOMESTIC PRODUCT



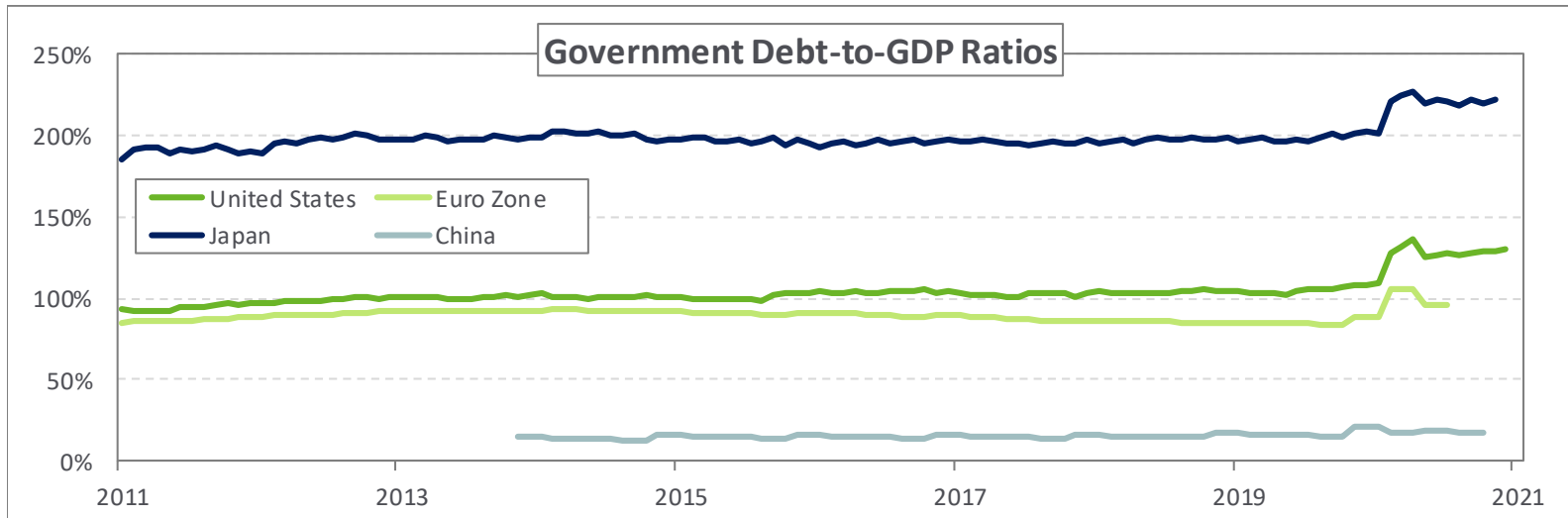
Source: Bureau of Economic Analysis, FactSet



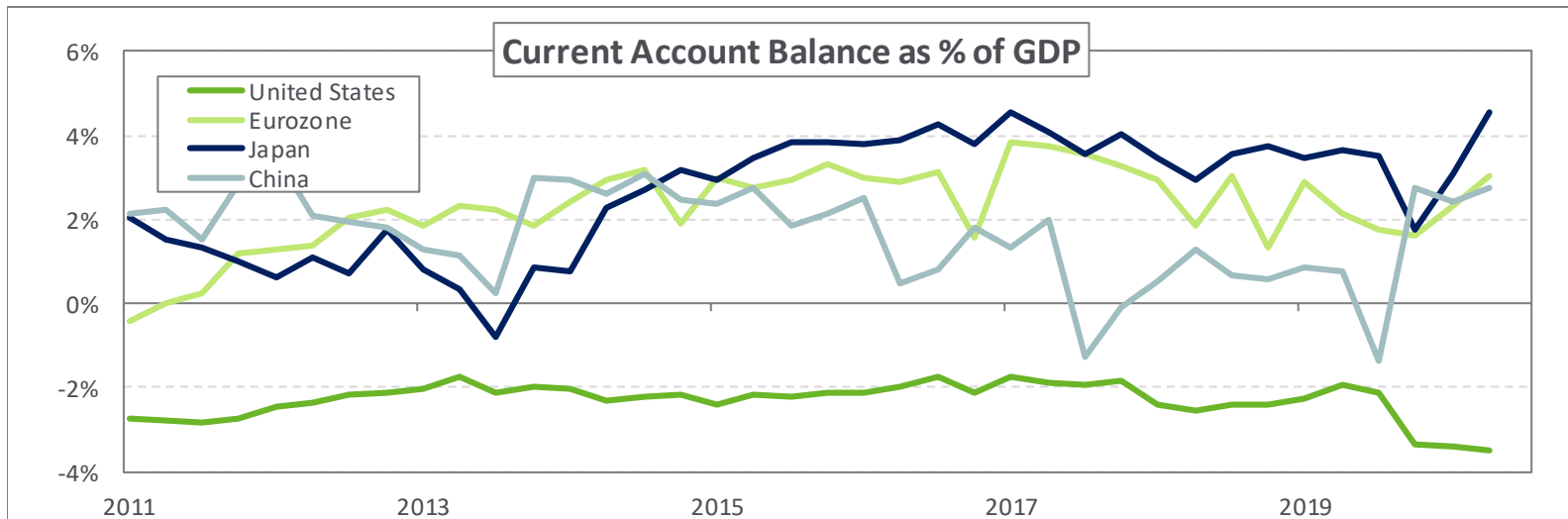
Source: IMF, FactSet



GROSS DOMESTIC PRODUCT METRICS



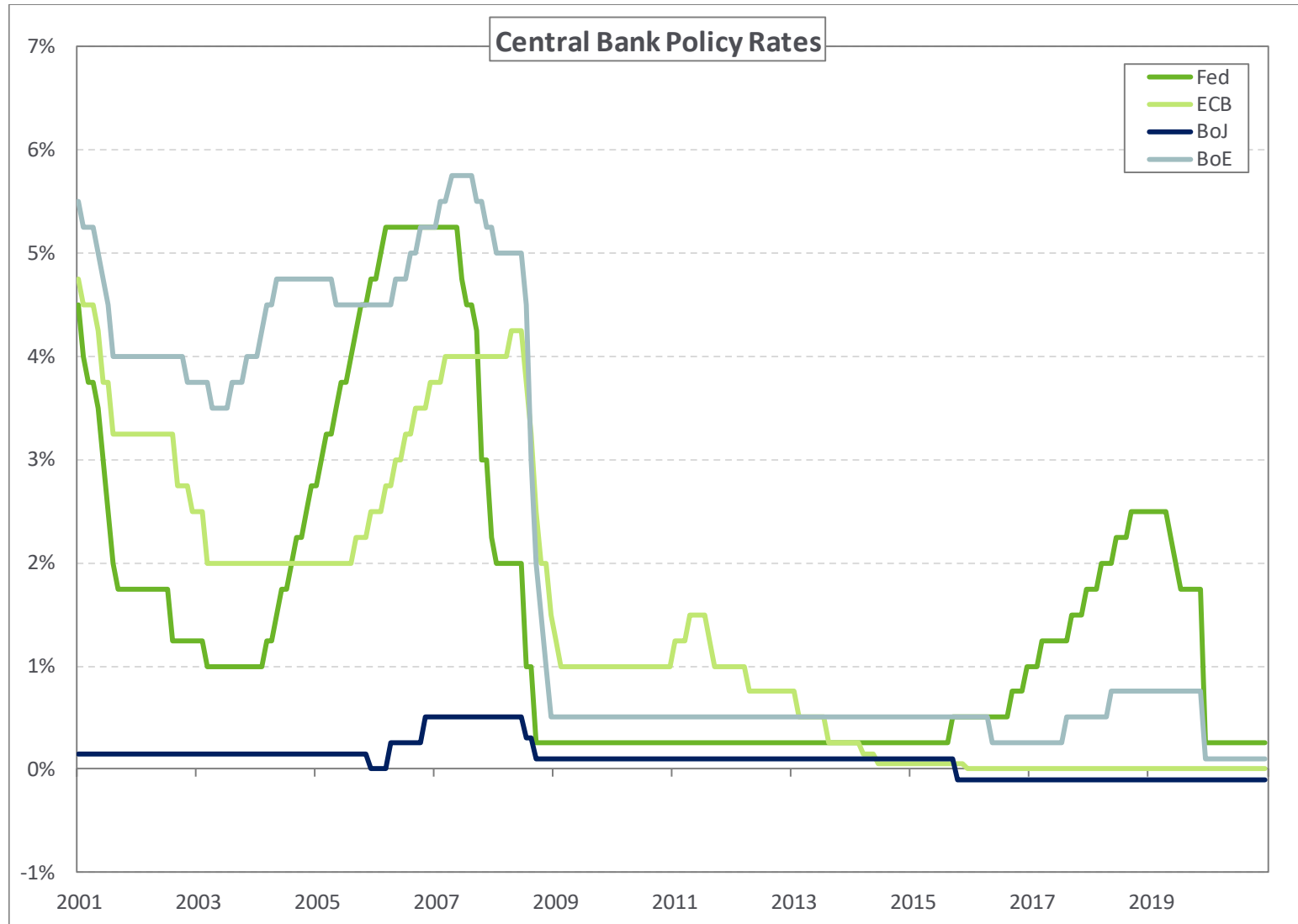
Source: IMF, FactSet



Source: FactSet



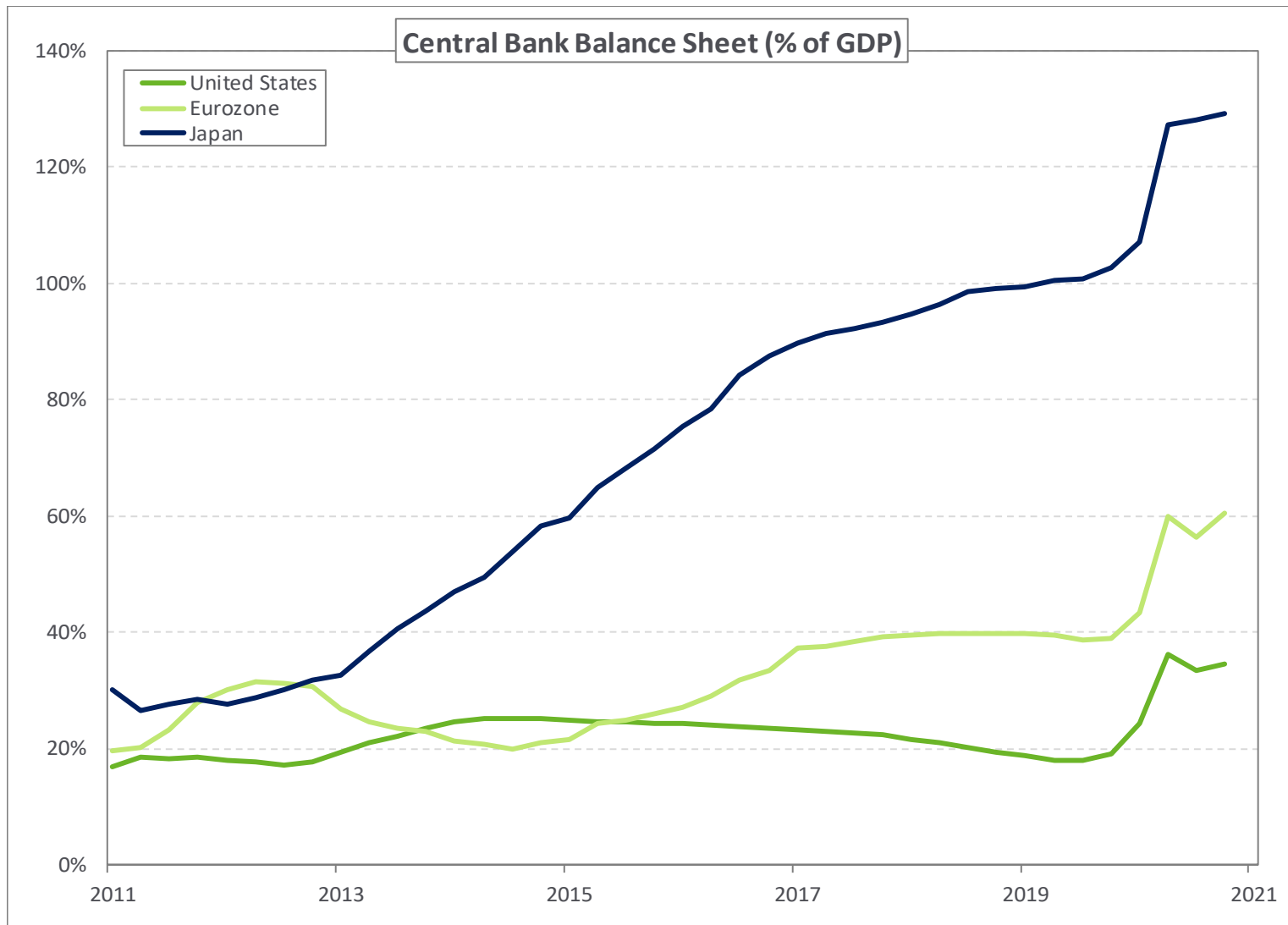
CENTRAL BANK RATES



Source: Federal Reserve, ECB, Bank of Japan, Bank of England, FactSet



CENTRAL BANK BALANCE SHEETS



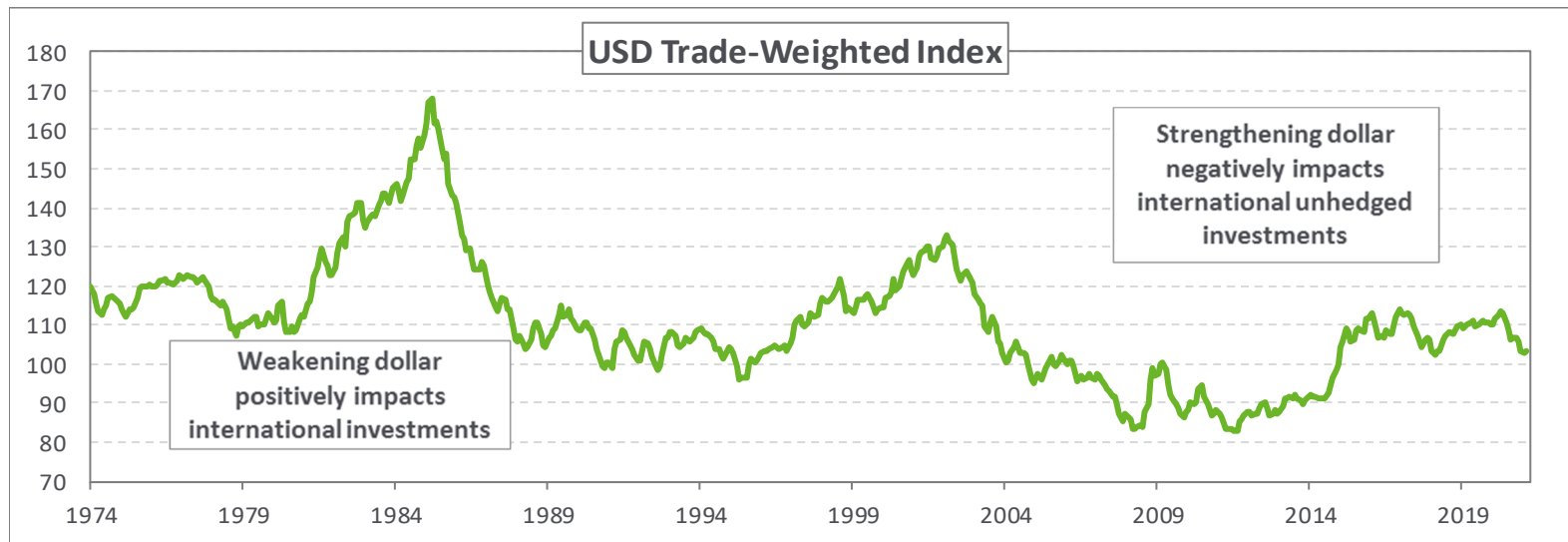
Source: FactSet



CURRENCIES

| % Change 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% |

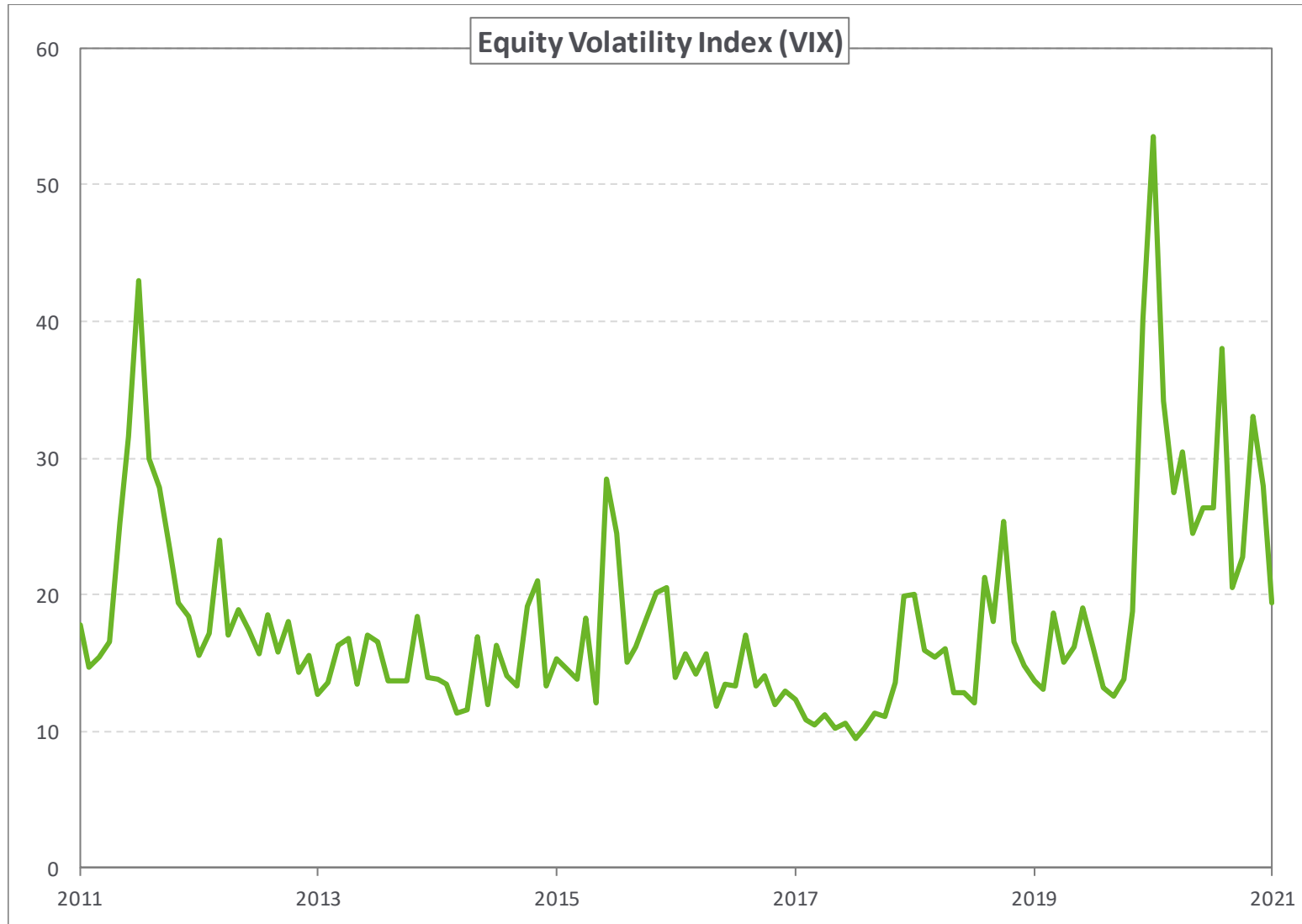
Source: FactSet



Source: FactSet



VOLATILITY



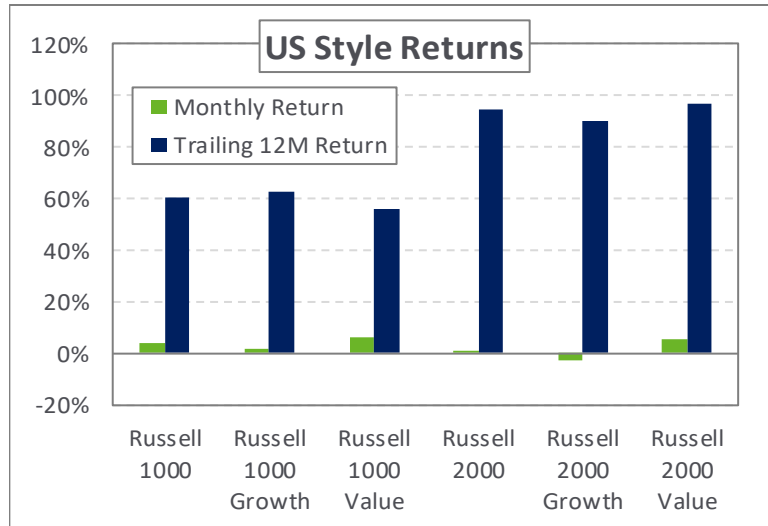
Source: CBOE, FactSet



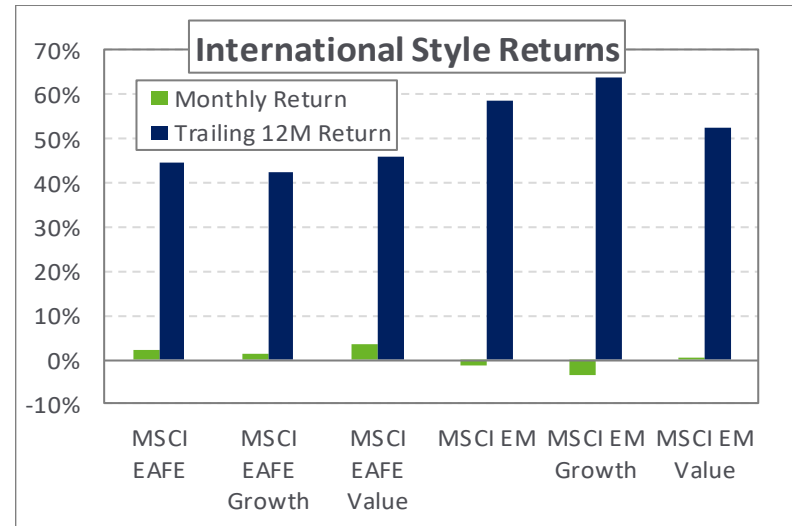
EQUITY

NEPC, LLC

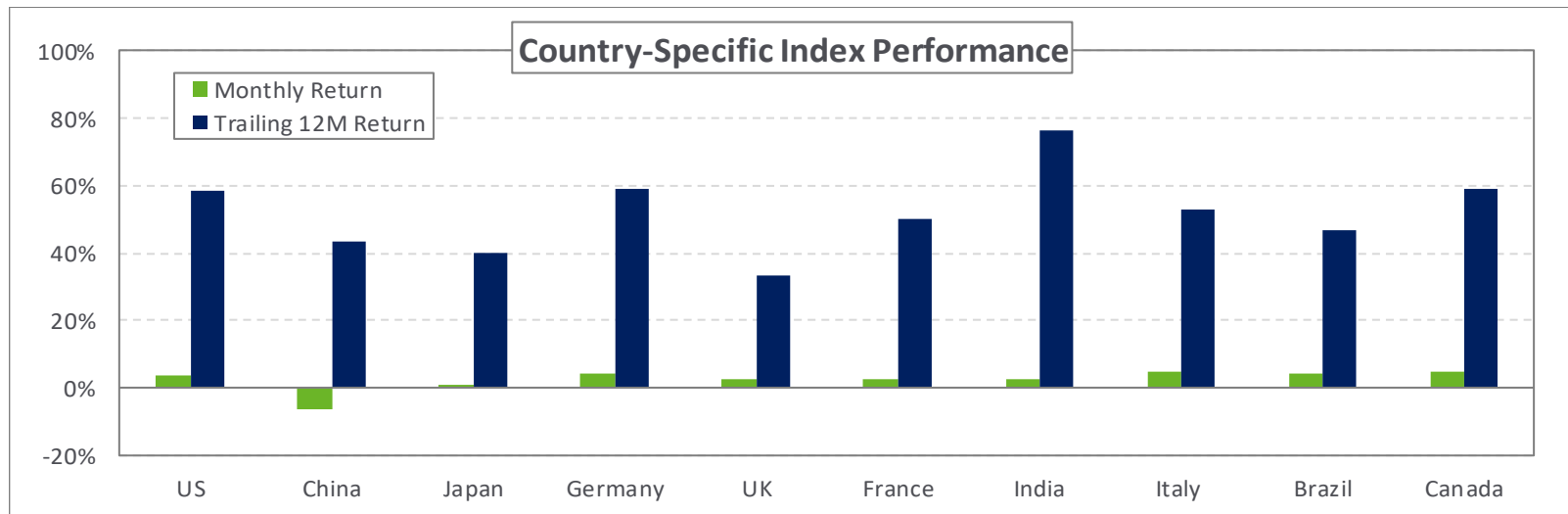
EQUITY INDEX PERFORMANCE



Source: Russell, FactSet



Source: MSCI, FactSet



Source: MSCI, FactSet
Represents returns in USD



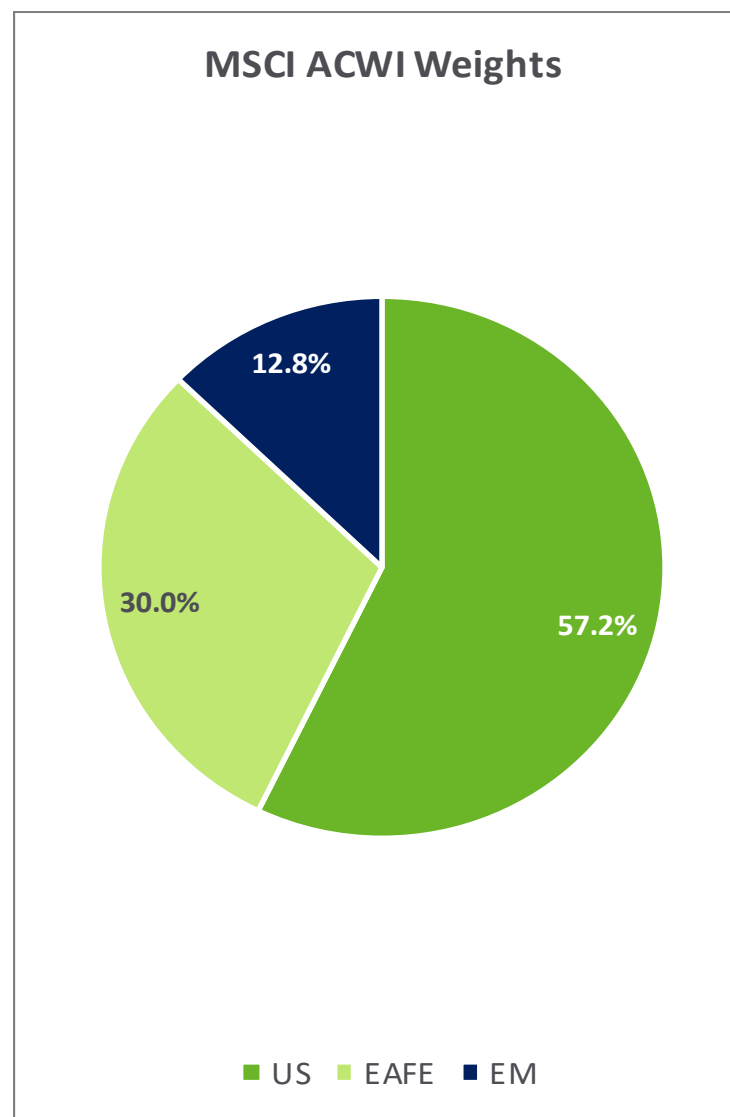
INDEX COMPOSITION

| | 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% |

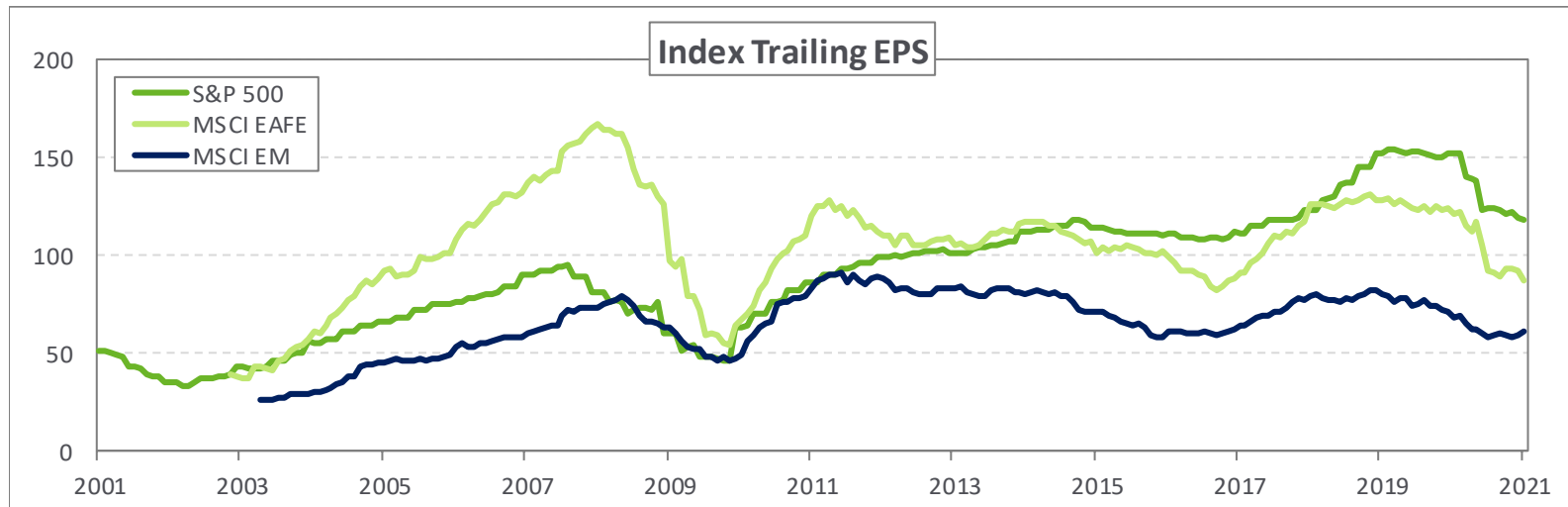
Source: MSCI, FactSet



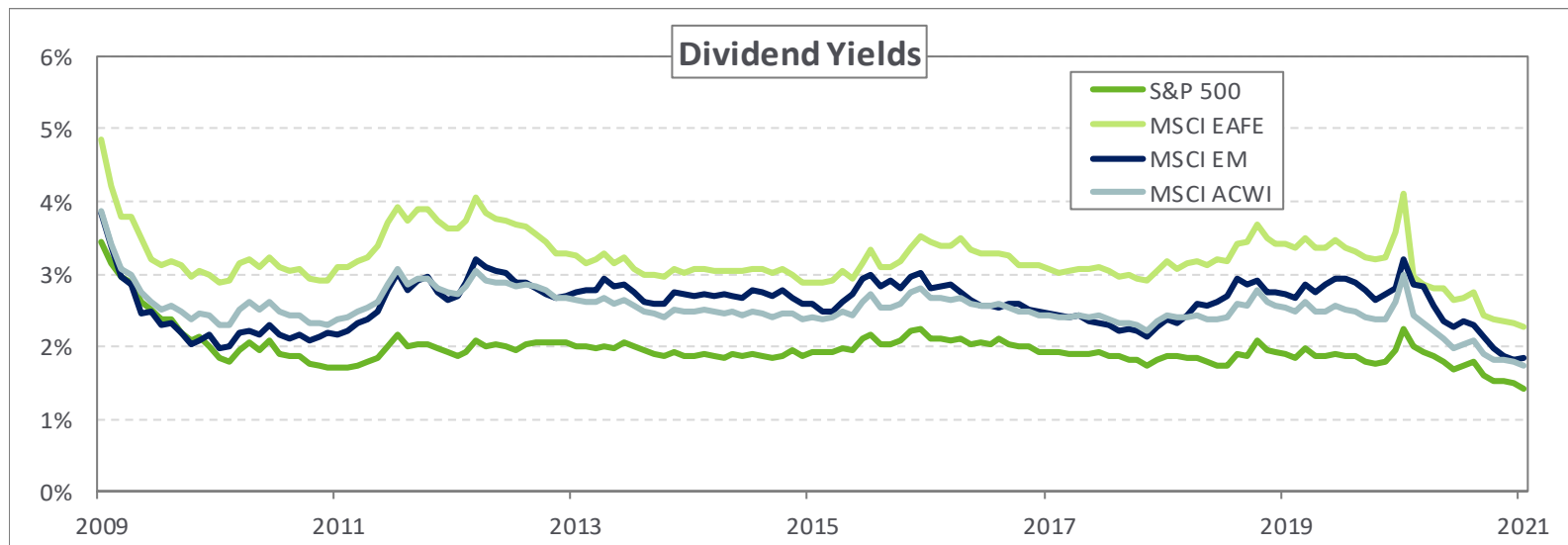
Source: MSCI, FactSet



EARNINGS & YIELDS



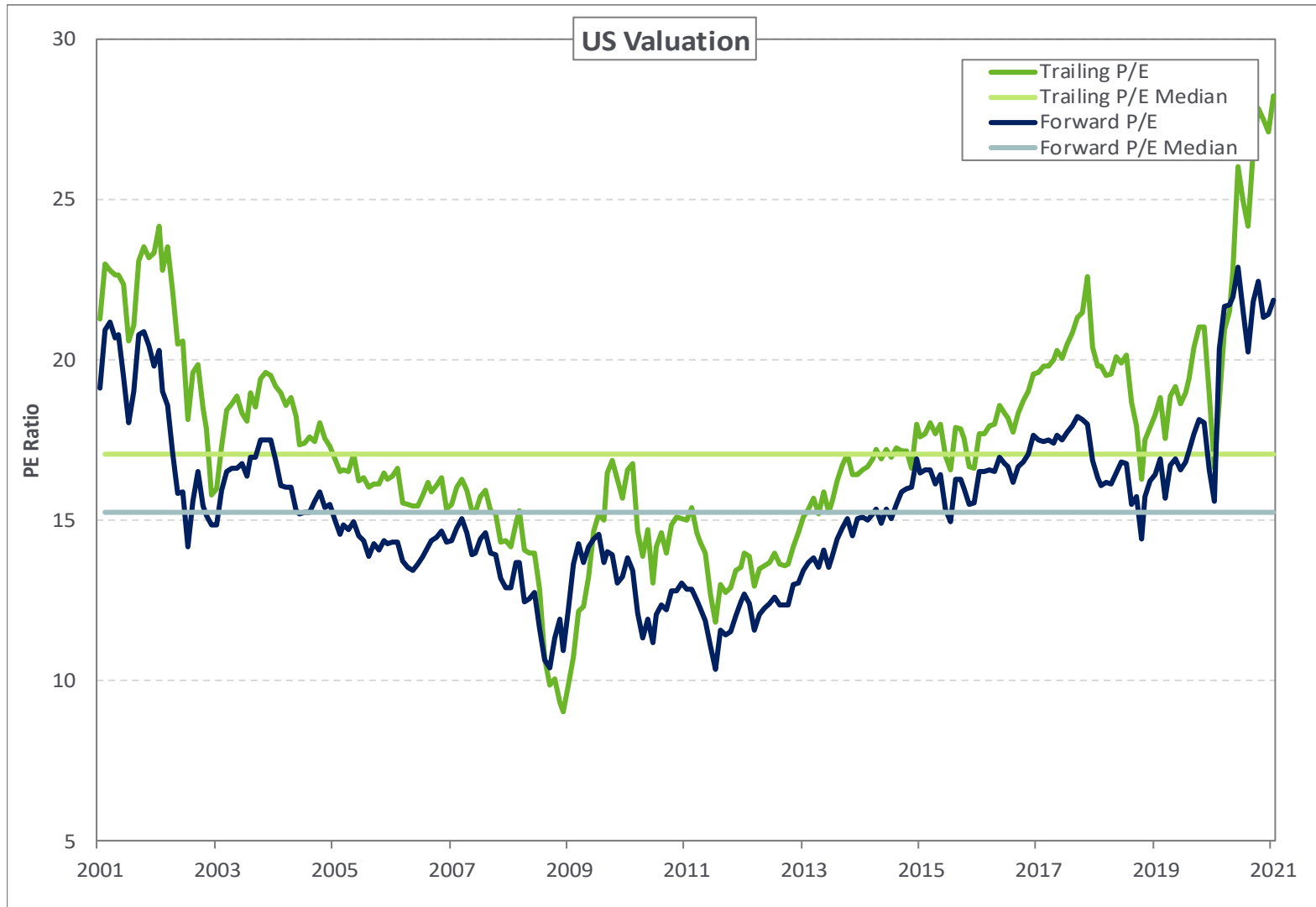
Source: FactSet



Source: FactSet



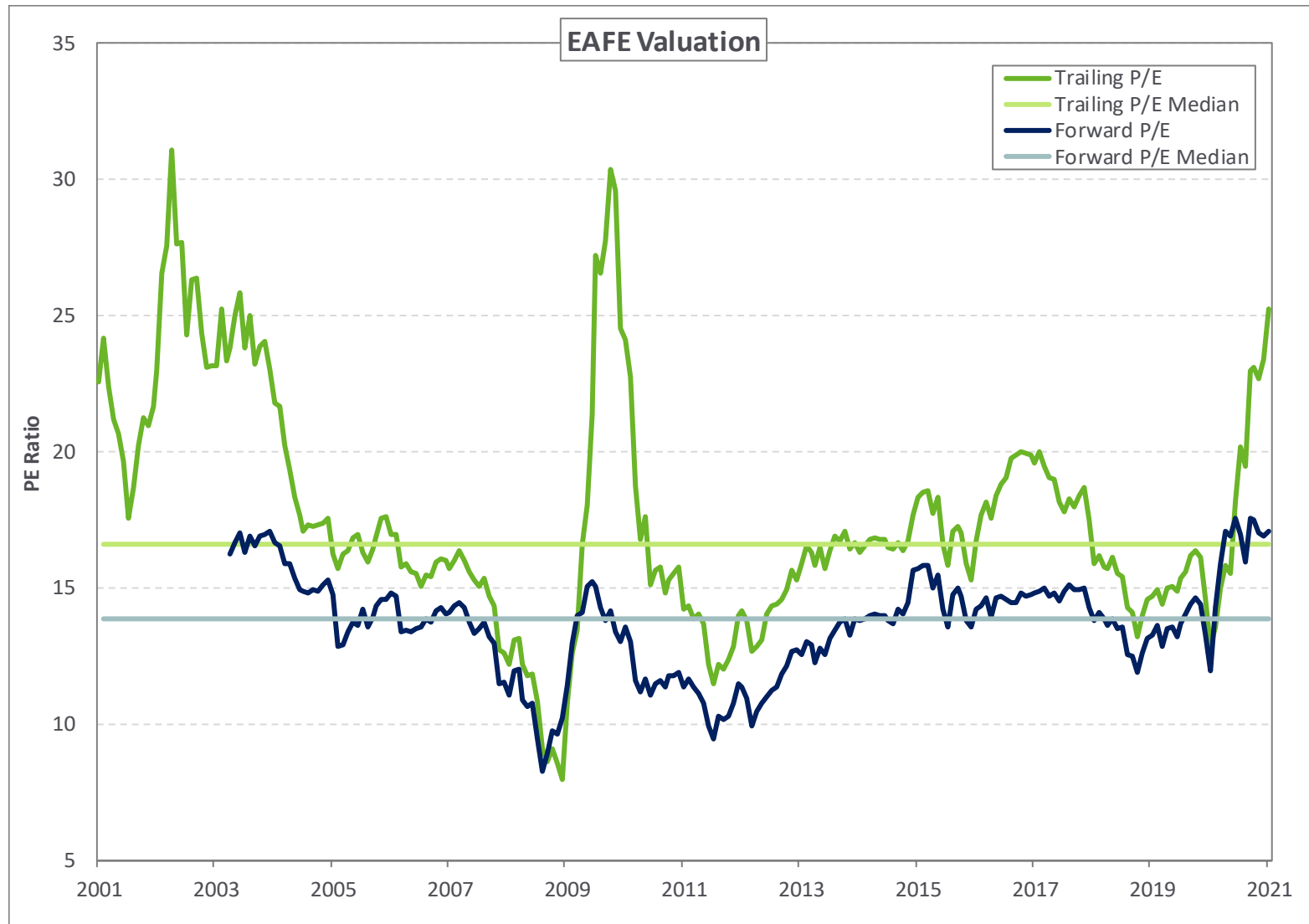
US EQUITY VALUATIONS



Source: S&P, FactSet



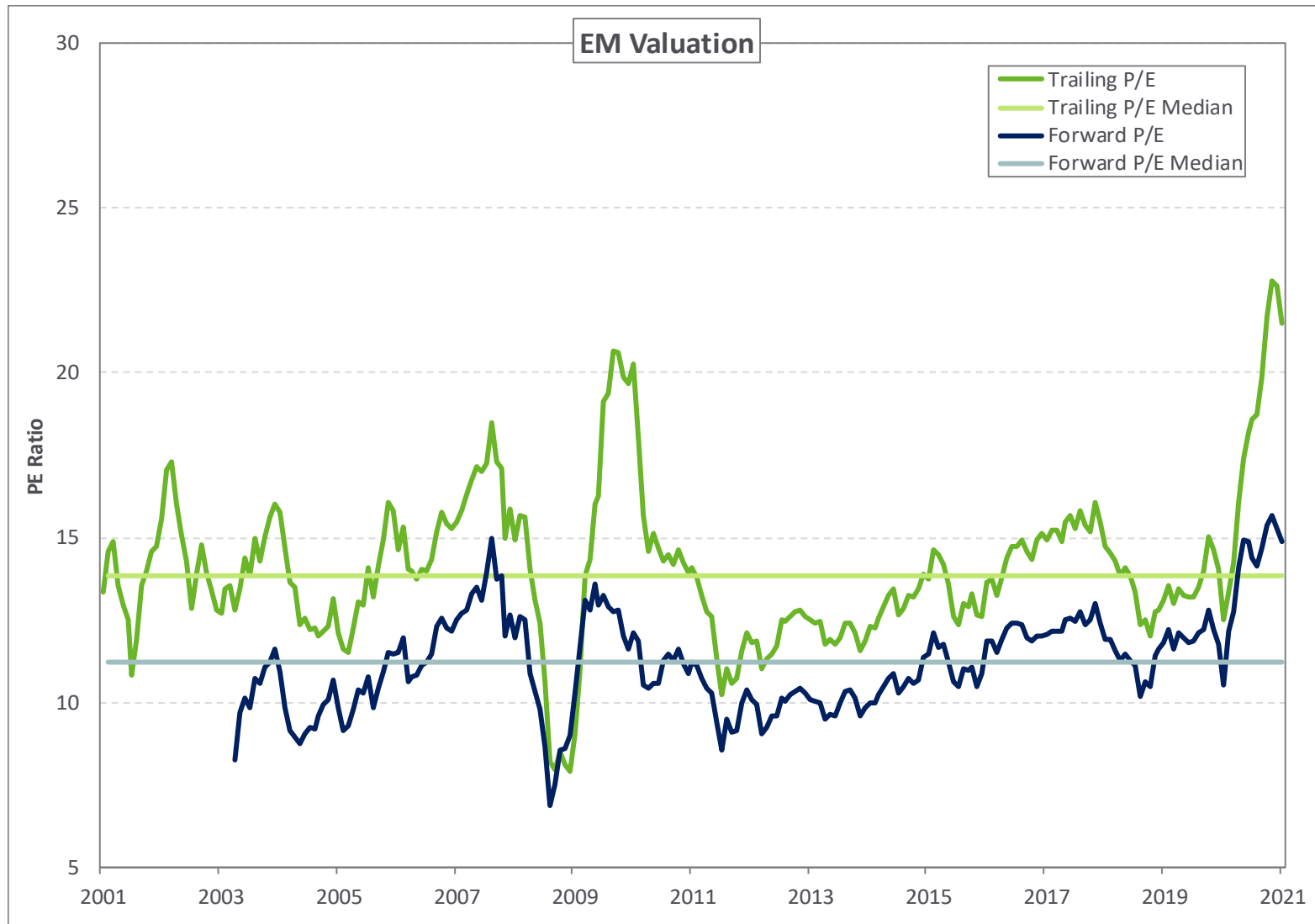
EAFE EQUITY VALUATIONS



Source: MSCI, FactSet



EM EQUITY VALUATIONS



Source: MSCI, FactSet



CREDIT

NEPC, LLC

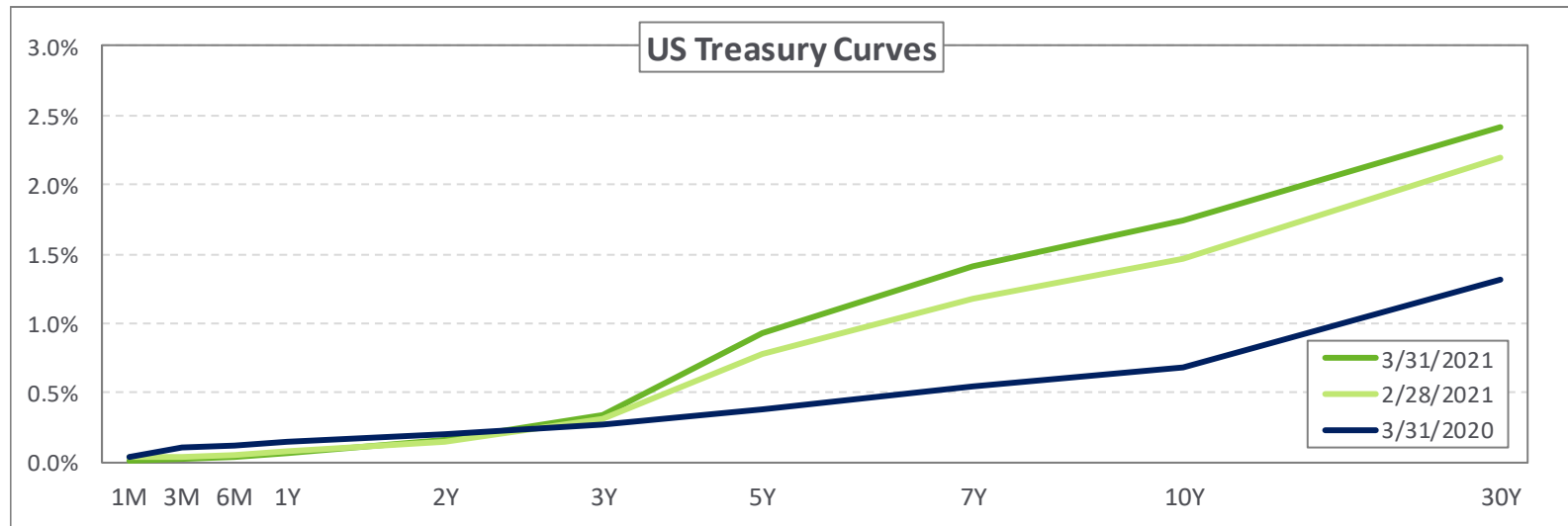
FIXED INCOME CHARACTERISTICS

| | Averages | | | Total 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



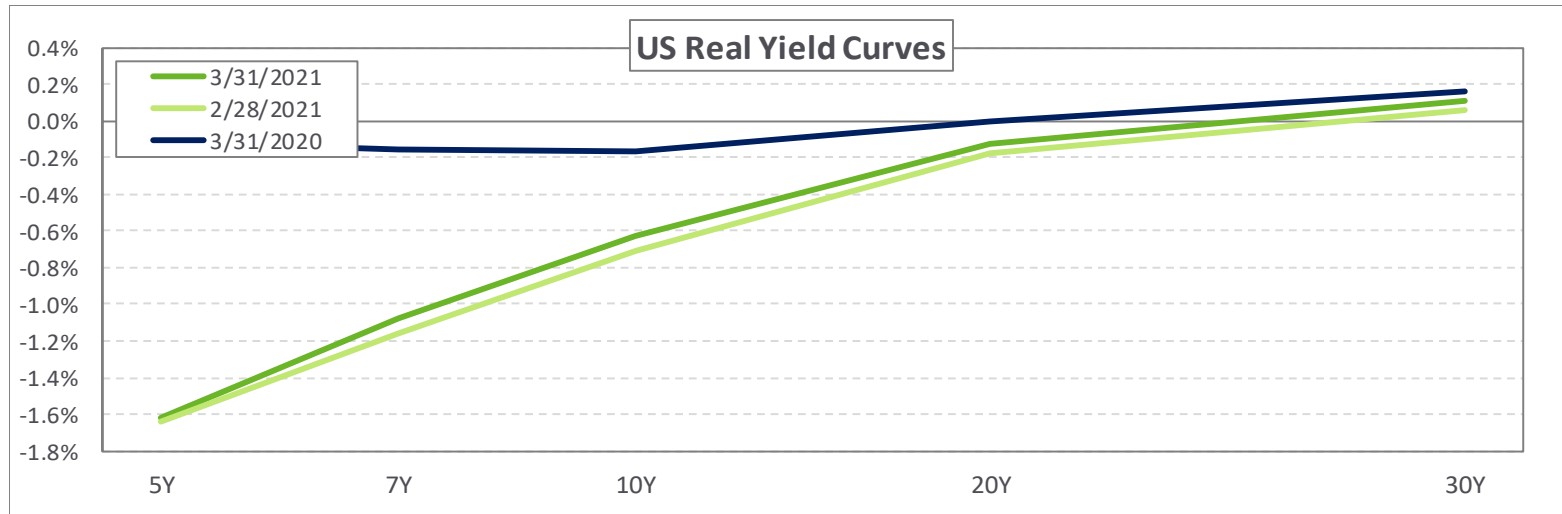
Source: FactSet

| | 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



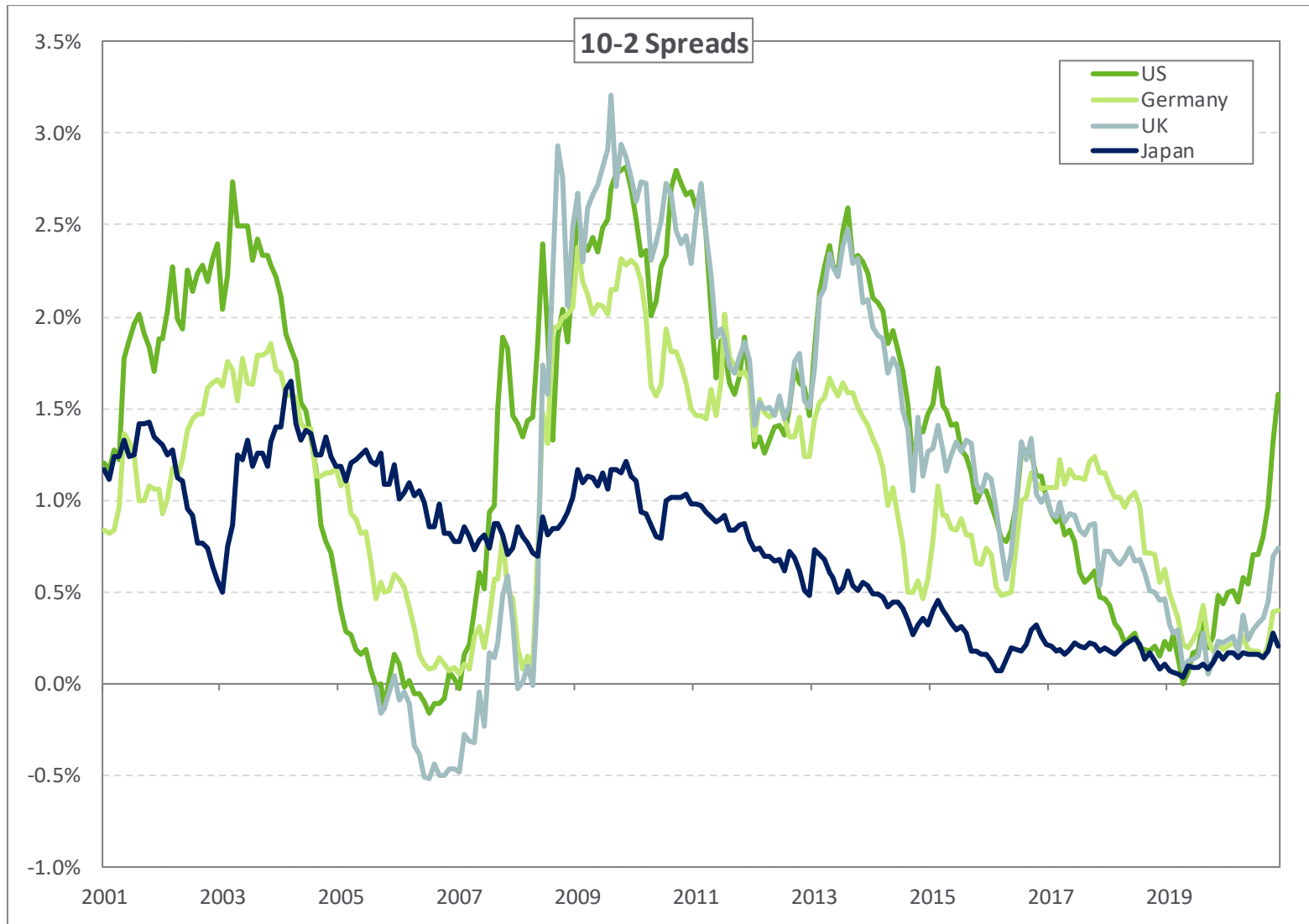
Source: FactSet

| | 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



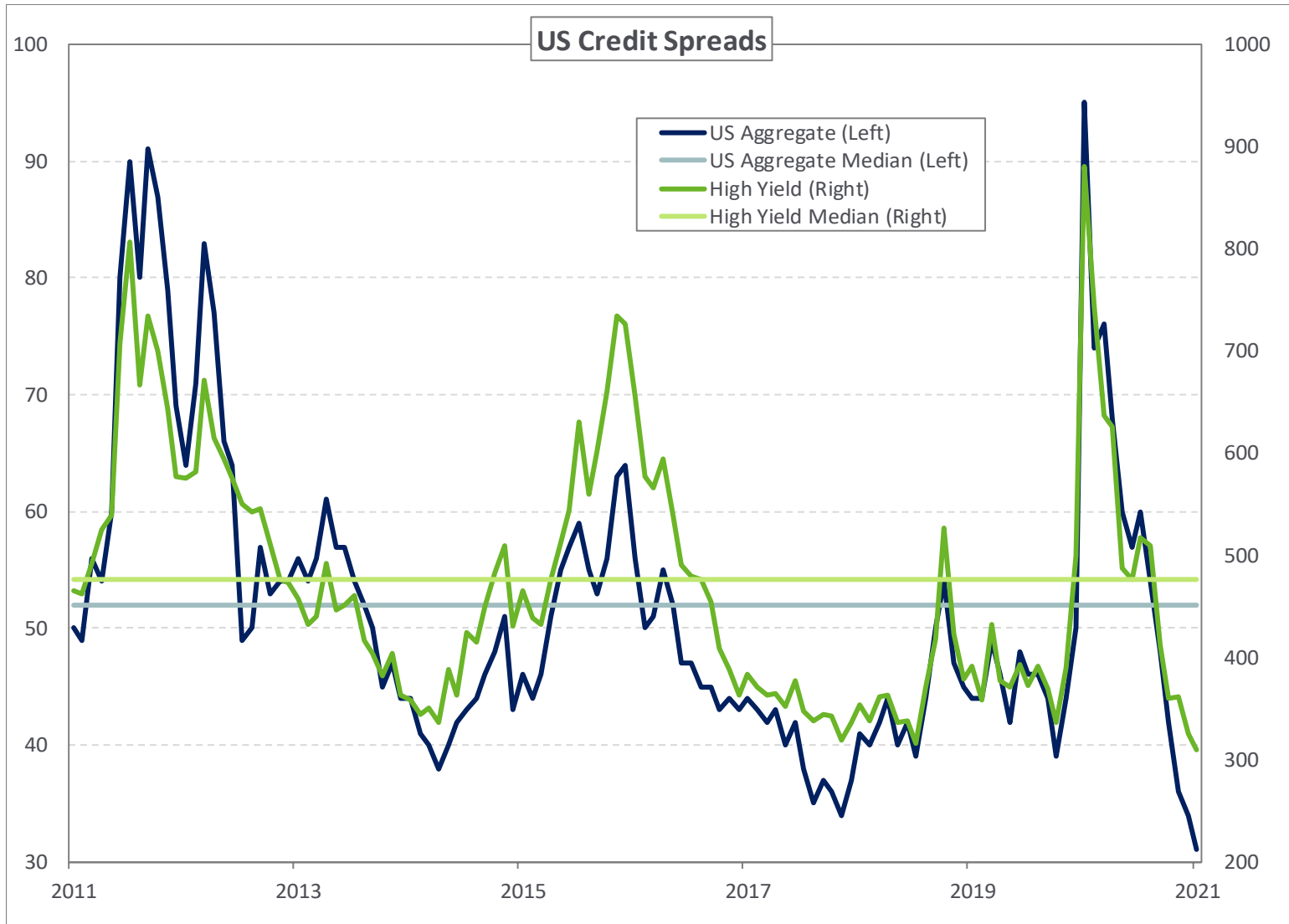
NOMINAL YIELDS



Source: FactSet



CREDIT SPREADS



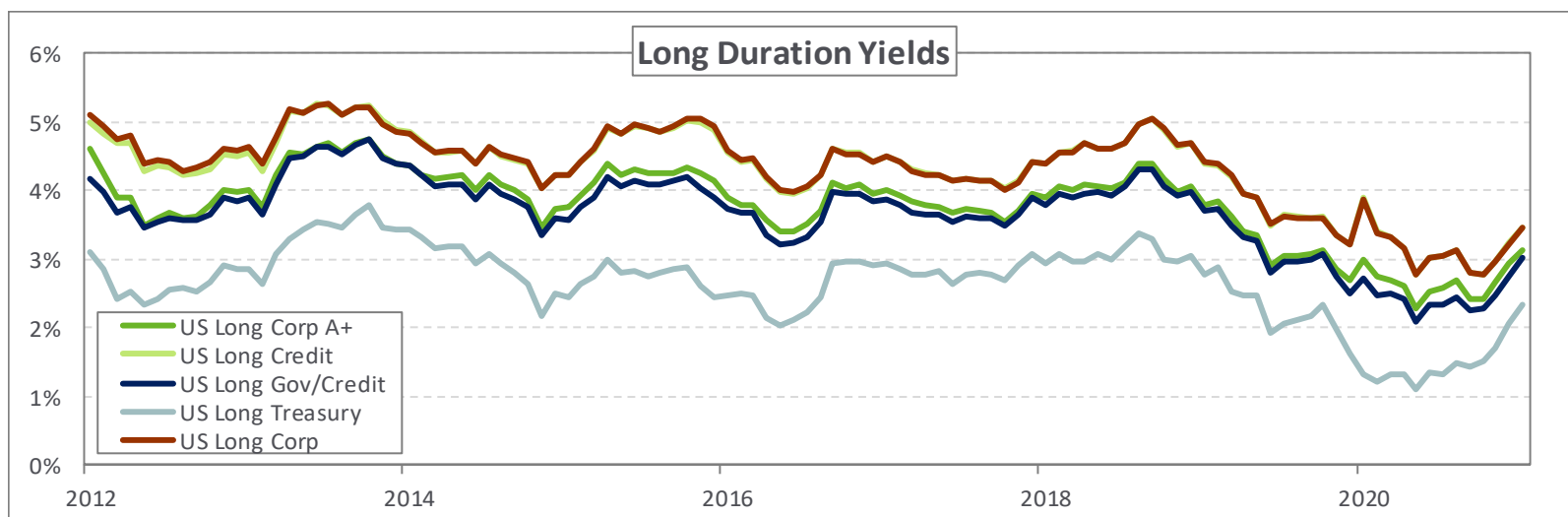
Source: Barclays, FactSet



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% | 3.9% | 14.7 |
| 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

NEPC, LLC

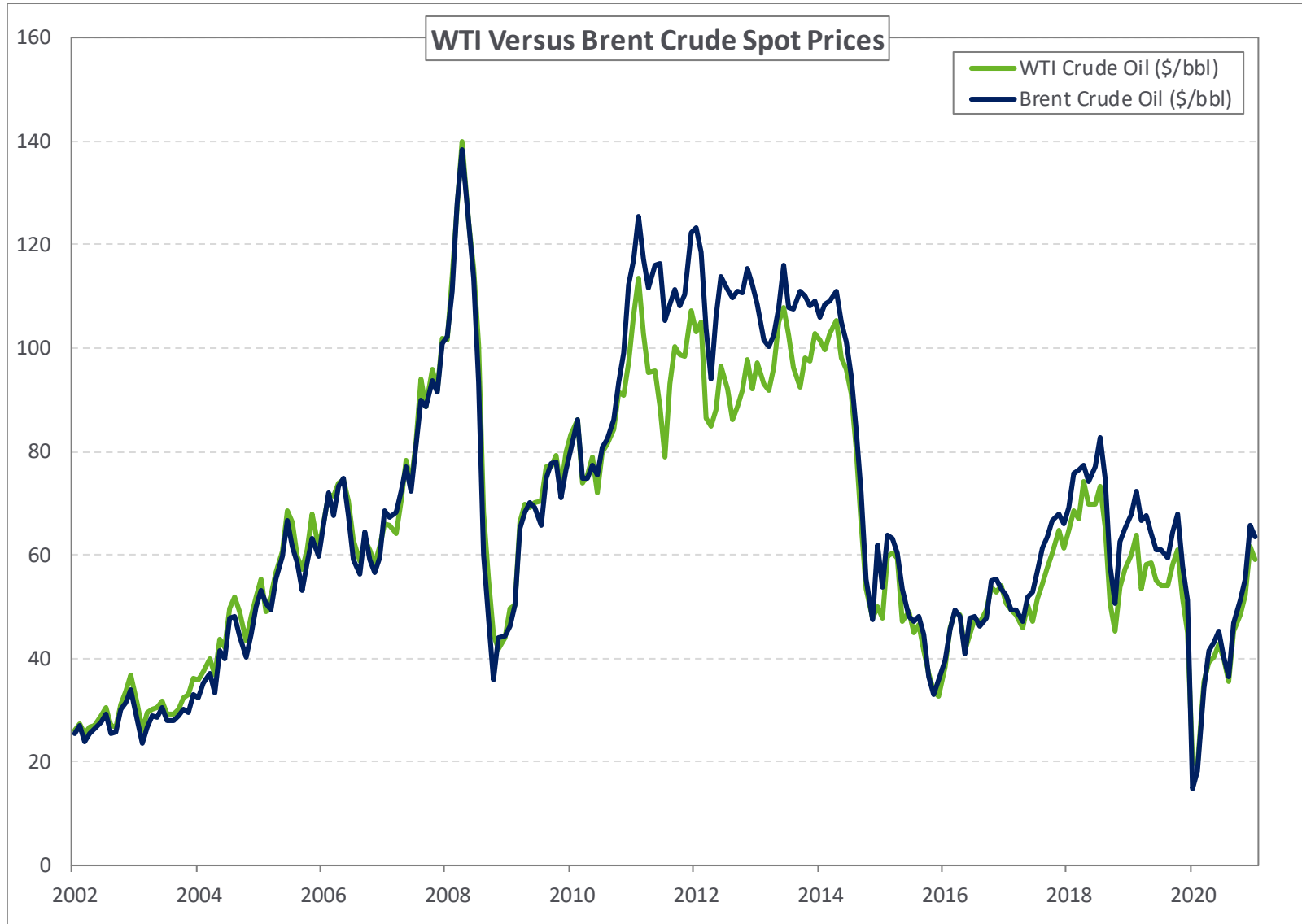
REAL ASSETS INDEX PERFORMANCE

| 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



Source: FactSet



DISCLAIMERS & DISCLOSURES

- Past performance is no guarantee of future results.
- Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.
- A “since inception” return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.
- NEPC’s preferred data source is the plan’s custodian bank or record-keeper. If data cannot be obtained from one of the preferred data sources, data provided by investment managers may be used. Information on market indices and security characteristics is received from additional providers. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within. In addition, some index returns displayed in this report or used in calculation of a policy index, allocation index or other custom benchmark may be preliminary and subject to change.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- The opinions presented herein represent the good faith views of NEPC as of the date of this presentation and are subject to change at any time. Neither fund performance nor universe rankings contained in this report should be considered a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

