



Pension

March 31, 2020

UC INVESTMENTS

UC Investments Way



UC Pension

1. Asset Allocation
2. Performance
3. Asset Classes
4. Risk Allocation

INVESTMENT OBJECTIVES

- Maximize real, long-term total returns (income plus capital appreciation adjusted for inflation), while assuming appropriate levels of risk.
- Maximize the probability of meeting the Plan's liabilities, subject to the Regents' funding policy.

UC Investments

INVESTMENT PRODUCTS

- Investing **Endowment** assets since 1933 (88 years)
- Investing **Blue & Gold** assets since 2019 (1 year)

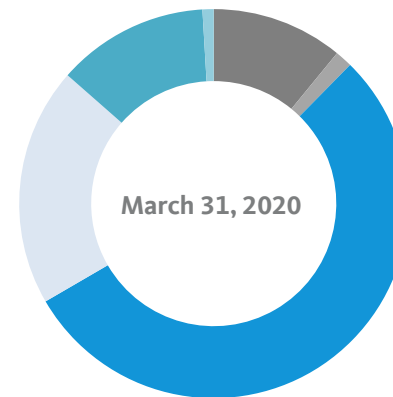
- Investing **Pension** assets since 1961 (60 years)

- Investing **Retirement Savings** assets since 1967 (53 years)

- Investing **Working Capital** since 1976 (45 years)
 - Investing **Total Return** since 2008 (12 years)
 - Investing **Short Term** since 1976 (45 years)

- Investing **Fiat Lux Insurance** assets since 2016 (4 years)

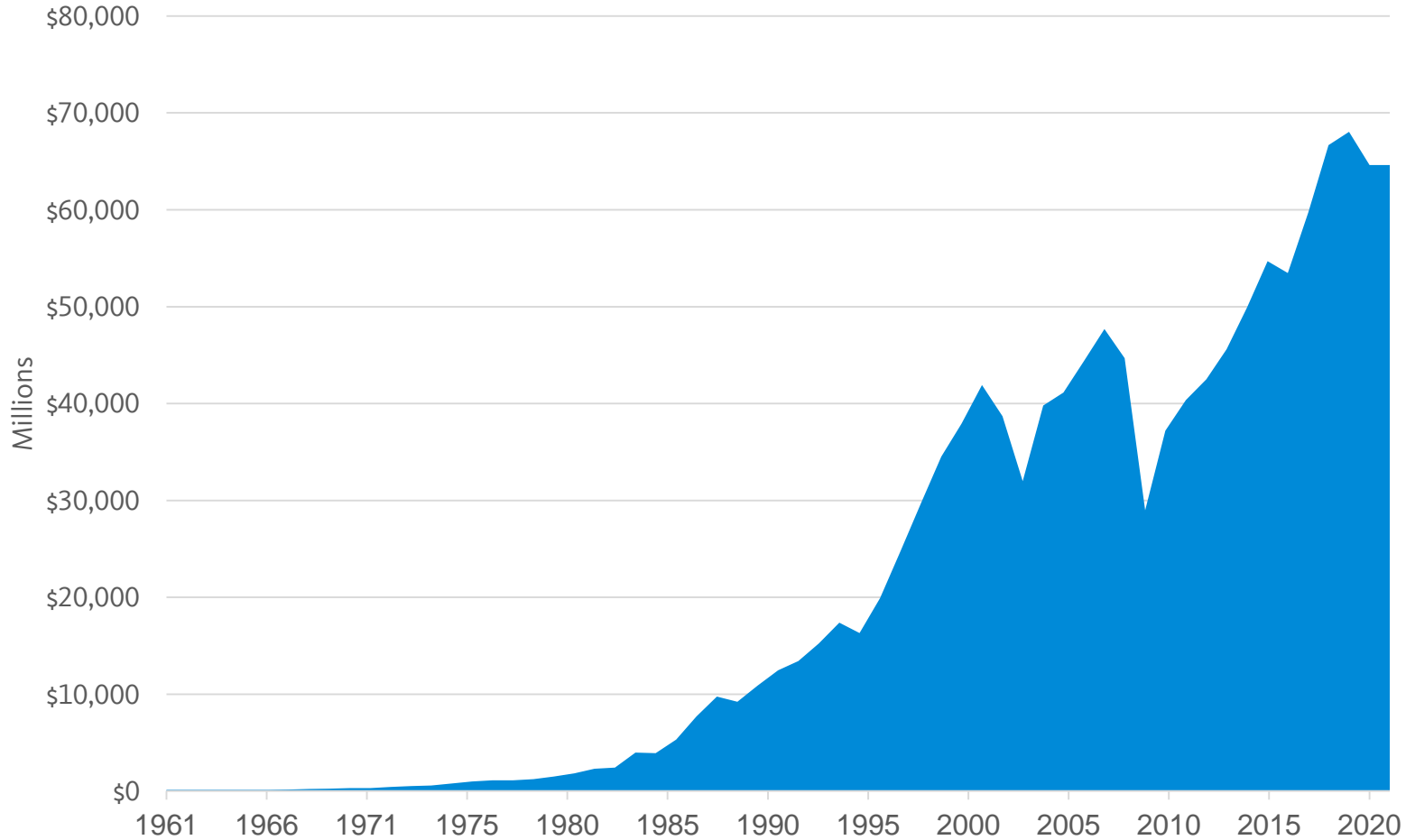
\$119.0 BILLION ACROSS 7 PRODUCTS



| | <u>\$ Billion</u> | <u>(%)</u> |
|----------------------|-------------------|------------|
| ● Endowment | 13.0 | 11 |
| ● Blue & Gold | 1.7 | 1 |
| ● Pension | 64.6 | 54 |
| ● Retirement Savings | 23.6 | 20 |
| ● Working Capital | 14.8 | 12 |
| Total Return | 7.7 | 6 |
| Short Term | 7.1 | 6 |
| ● Fiat Lux Insurance | 1.1 | 1 |

Pension Assets Growth

PENSION ASSETS 1961 – 2020



ASSET GROWTH

March 31, 2020

| | | |
|---------------------|----------------|-----------------|
| Today | \$64.6B | △ Change |
| 1 Year Ago | \$68.0B | -\$3.4B |
| 5 Years Ago | \$54.7B | +\$9.9B |
| 6 Years Ago | \$49.9B | +\$14.7B |
| 10 Years Ago | \$37.2B | +\$27.4B |

Pension Assets Under Management

| Quarter To Date (3 Months) | Market Value (\$B) |
|-----------------------------------|---------------------------|
| December 31, 2019 | 73.6 |
| Market Gains | (10.7) |
| Value Added | 1.5 |
| Net Cash Flow | 0.2 |
| March 31, 2020 | 64.6 |

| Fiscal Year To Date (9 Months) | Market Value (\$B) |
|---------------------------------------|---------------------------|
| June 30, 2019 | 70.0 |
| Market Gains | (6.2) |
| Value Added | 1.1 |
| Net Cash Flow | (0.3) |
| March 31, 2020 | 64.6 |

Pension Assets Under Management

| Month To Date (1 Month) | Market Value (\$B) |
|--------------------------------|---------------------------|
| March 31, 2020 | 64.6 |
| Market Gains | 4.6 |
| Value Added | (1.2) |
| Net Cash Flow | (0.1) |
| April 30, 2020 | 67.9 |

Pension Asset Allocation

| As of March 31, 2020 | Market Value (\$B) | Weight (%) | Over/Underweight to Interim Policy (%) | Interim Policy (%) | Long-Term Target (%) |
|----------------------|--------------------|---------------|--|--------------------|----------------------|
| Public Equity | 31.2 | 48.3 | (6.3) | 54.6 | 50 |
| Fixed Income | 14.4 | 22.3 | 1.3 | 21.0 | 20 |
| Other Investments | 14.5 | 22.4 | 1.4 | 21.0 | 30 |
| Absolute Return | 3.9 | 6.1 | (0.6) | 6.7 | 10 |
| Private Equity | 4.2 | 6.4 | 0.3 | 6.1 | 10 |
| Real Estate | 4.3 | 6.7 | 0.6 | 6.1 | 7 |
| Real Assets | 2.1 | 3.2 | 1.1 | 2.1 | 3 |
| Cash | 4.5 | 7.0 | 3.6 | 3.4 | 0 |
| Total | \$64.6B | 100.0% | | 100.0% | 100% |

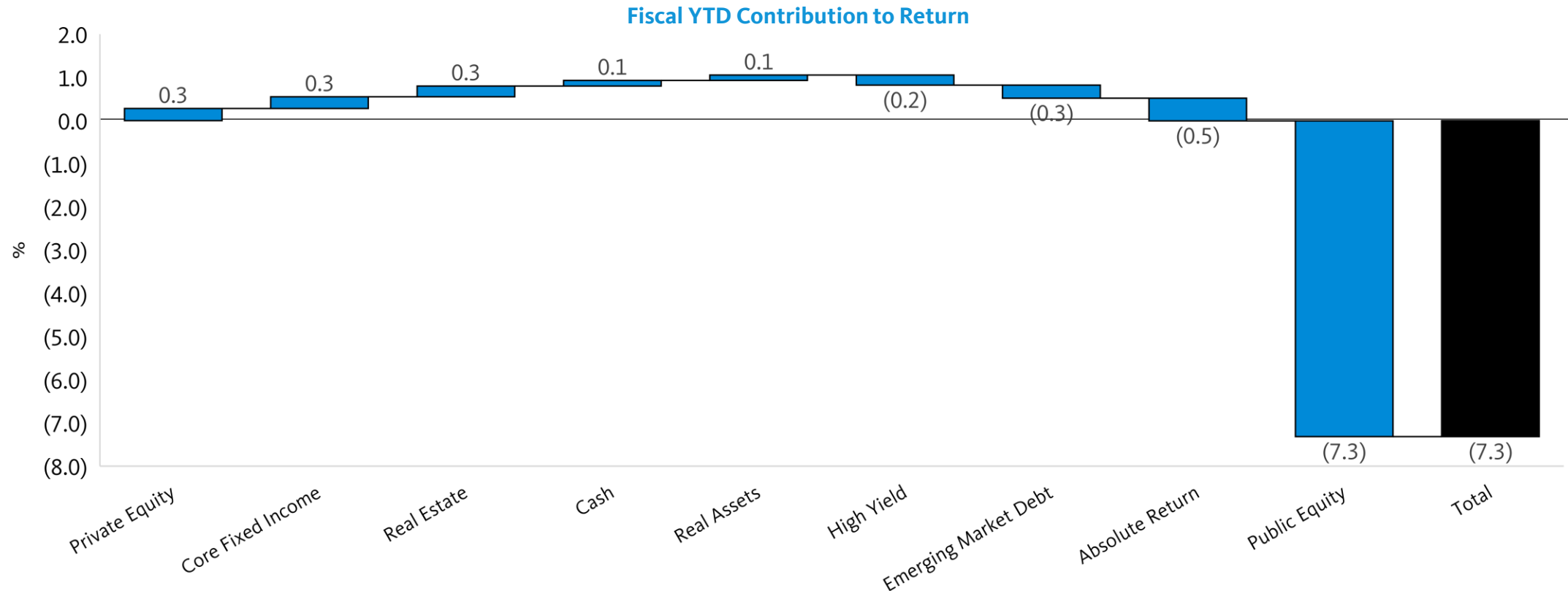
Pension Asset Allocation

| As of April 30, 2020 | Market Value (\$B) | Weight (%) | Over/Underweight to Interim Policy (%) | Interim Policy (%) | Long-Term Target (%) |
|----------------------|--------------------|---------------|--|--------------------|----------------------|
| Public Equity | 27.5 | 40.5 | (14.1) | 54.6 | 50 |
| Fixed Income | 14.7 | 21.7 | 0.7 | 21.0 | 20 |
| Other Investments | 14.6 | 21.6 | 0.6 | 21.0 | 30 |
| Absolute Return | 4 | 5.9 | (0.9) | 6.7 | 10 |
| Private Equity | 4.2 | 6.3 | 0.2 | 6.1 | 10 |
| Real Estate | 4.4 | 6.4 | 0.3 | 6.1 | 7 |
| Real Assets | 2 | 3 | 0.9 | 2.1 | 3 |
| Cash | 11 | 16.2 | 12.8 | 3.4 | 0 |
| Total | \$67.9B | 100.0% | | 100.0% | 100% |

Pension Performance

| As of March 31, 2020 Net Returns (%) | Market Value (\$B) | Weight (%) | QTD 3 Months | Fiscal YTD 9 Months | Annualized Returns | | | | | | |
|---|-----------------------|---------------|-----------------|------------------------|--------------------|--------|--------|--------|---------|---------|---------|
| | | | | | 1 Year | 3 Year | 5 Year | 6 Year | 10 Year | 20 Year | 25 Year |
| UC Pension | 64.6 | 100 | (12.4) | (7.3) | (4.0) | 3.2 | 3.7 | 4.4 | 6.5 | 4.7 | 7.8 |
| Policy Benchmark* | | | (14.4) | (8.9) | (6.0) | 2.6 | 3.2 | 3.7 | 5.8 | 4.3 | 7.3 |
| Value Added | | | 2.0 | 1.6 | 2.0 | 0.6 | 0.5 | 0.7 | 0.7 | 0.4 | 0.5 |

*The Policy Benchmark is a weighted average of investment policy targets.



Pension Attribution – Fiscal Year to Date

| As of March 31, 2020 | Portfolio Return | Benchmark Return | Allocation Attribution | Selection Attribution | Total Attribution |
|--------------------------|------------------|------------------|------------------------|-----------------------|-------------------|
| Public Equity | (14.1) | (15.6) | 0.1 | 0.8 | 0.9 |
| Fixed Income | 0.5 | 1.7 | 0.1 | (0.2) | (0.1) |
| Core | 3.8 | 5.7 | 0.2 | (0.3) | (0.1) |
| High Yield | (7.5) | (9.7) | (0.0) | 0.1 | 0.1 |
| Emerging Market Debt | (10.5) | (10.5) | 0.0 | (0.0) | 0.0 |
| TIPS | 3.6 | 3.9 | (0.1) | (0.0) | (0.1) |
| Other Investments | 0.1 | (3.7) | 0.9 | (0.2) | 0.7 |
| Absolute Return | (8.4) | (5.6) | (0.0) | (0.2) | (0.2) |
| Private Equity | 4.4 | (11.4) | 0.8 | 0.0 | 0.8 |
| Real Estate | 2.7 | 3.2 | (0.0) | (0.0) | (0.0) |
| Real Assets | 3.9 | 3.9 | 0.1 | (0.0) | 0.1 |
| Cash | 1.6 | 1.6 | 0.1 | (0.0) | 0.1 |
| Total | (7.3) | (8.9) | 1.2 | 0.4 | 1.6 |

Pension Policy Benchmark

| Asset Class | Policy Benchmark Component | Interim Policy (%) | Allowable Ranges | | Long-Term Target (%) | Allowable Ranges | |
|--------------------------------|--|--------------------|------------------|---------|----------------------|------------------|--------|
| | | | Min (%) | Max (%) | | Min (%) | (%)Max |
| Total Public Equity | MSCI All Country World Index Net IMI (Tobacco Free) | 54.6 | 40.0 | 59.1 | 50.0 | 40.0 | 60.0 |
| Total Fixed Income | | | | | | | |
| Core | Barclays U.S. Aggregate Bond Index | 14.0 | 6.8 | 19.2 | 13.0 | 10.0 | 16.0 |
| High Yield Debt | Merrill Lynch High Yield Cash Pay Index | 2.5 | 1.5 | 3.5 | 2.5 | 0.0 | 5.0 |
| Emerging Market Debt | JP Morgan Emerging Markets Bond - Global Diversified | 2.5 | 2.0 | 3.0 | 2.5 | 0.0 | 5.0 |
| TIPS | Barclays U.S. TIPS | 2.0 | 2.0 | 2.0 | 2.0 | 0.0 | 4.0 |
| Total Other Investments | | | | | | | |
| Private Equity | Russell 3000 + 2.0% | 6.1 | 1.1 | 11.1 | 10.0 | 5.0 | 15.0 |
| Absolute Return | HFRI Fund of Funds Composite | 6.7 | 0.0 | 16.7 | 10.0 | 0.0 | 20.0 |
| Real Estate | NCREIF ODCE Index (lagged 3 months) | 6.1 | 1.1 | 11.1 | 7.0 | 2.0 | 12.0 |
| Real Assets | Actual Real Asset Portfolio Returns | 2.1 | 0.0 | 5.1 | 3.0 | 0.0 | 6.0 |
| Cash | | 3.4 | 0.0 | 13.4 | 0.0 | 0.0 | 10.0 |

Public Equity

| As of March 31, 2020 Net Returns (%) | Market Value (\$B) | Weight (%) | QTD 3 Months | Fiscal YTD 9 Months | 1 Year | Annualized Returns | | | | | |
|---|-----------------------|---------------|-----------------|------------------------|--------|--------------------|--------|--------|---------|---------|---------|
| | | | | | | 3 Year | 5 Year | 6 Year | 10 Year | 20 Year | 25 Year |
| Public Equity | 31.2 | 100 | (21.7) | (14.1) | (11.0) | 1.6 | 3.0 | 3.8 | 6.6 | 3.2 | 7.2 |
| Policy Benchmark* | | | (22.5) | (15.6) | (12.7) | 0.9 | 2.5 | 3.0 | 6.0 | 4.1 | 8.2 |
| Value Added | | | 0.8 | 1.5 | 1.7 | 0.7 | 0.5 | 0.8 | 0.6 | (0.9) | (1.0) |
| Active | 10.6 | 34 | (20.7) | (12.2) | (9.3) | - | - | - | - | - | - |
| Passive | 20.6 | 66 | (22.2) | (15.1) | (12.0) | - | - | - | - | - | - |

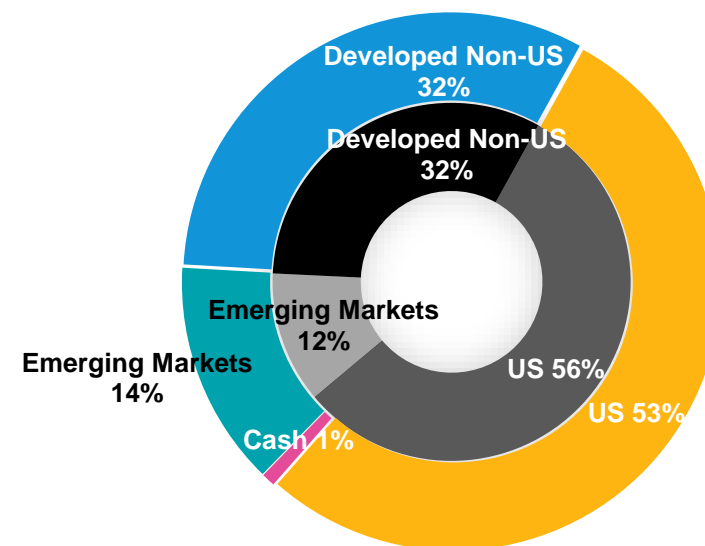
* Prior to July 1, 2016, the total public equity benchmark was an aggregate of benchmarks for underlying equity portfolios.

| Active Managers | # of funds | Weight |
|--------------------------|------------|--------------|
| Global Generalist | 5 | 15.6% |
| US | 4 | 6.6% |
| Developed Non-US | 4 | 4.7% |
| Global Sector Specialist | 3 | 4.0% |
| Emerging Markets | 4 | 3.0% |
| | 20 | 33.9% |

| Passive Index Exposure | Strategy | Weight |
|----------------------------|----------------|--------|
| MSCI ACWI IMI Tobacco Free | Global Passive | 65.8% |

Geographic Exposure

Pension ■ ■ ■ ■
 Benchmark ■ ■ ■



Public Equity

Attribution:

UCRP outperformance FYTD 2019/20 driven by manager stock selection, as well as over weights to healthcare and China.

| Top 3 Performers FYTD | FYTD return | Weight |
|------------------------------|-------------|--------|
| 1. Global Sector Specialist | 7.9% | 1.7% |
| 2. Global Sector Specialist | 3.4% | 1.0% |
| 3. Global Generalist Manager | 1.7% | 3.5% |

| Bottom 3 Performers FYTD | FYTD return | Weight |
|--|-------------|--------|
| 1. Global Generalist Manager | -35.8% | 0.7% |
| 2. Global Sector Specialist | -24.7% | 1.3% |
| 3. Non-US Manager | -18.5% | 1.1% |
| UCRP Benchmark (MSCI All Country World Index Net IMI Tobacco Free) | -15.6% | |

Public Equity

| As of March 31, 2020 External Manager | Market Value (\$M) | Manager (%) | MSCI ACWI IMI (%) | S&P 500 (%) | Annualized Return |
|--|-----------------------|----------------|----------------------|----------------|----------------------|
| MSCI ACWI IMI Tobacco Free | 20,565 | 2.9 | 2.9 | 7.7 | 6 Years |
| Manager 2 | 1,990 | 7.4 | 2.9 | 7.7 | 6 Years |
| Manager 3 | 1,147 | 8.1 | 2.9 | 7.7 | 6 Years |
| Manager 4 | 1,086 | 5.8 | 2.9 | 7.7 | 6 Years |
| Manager 5 | 939 | 8.6 | 2.9 | 7.7 | 6 Years |
| Manager 6 | 623 | 7.2 | 2.9 | 7.7 | 6 Years |
| Manager 7 | 577 | 13.6 | 2.2 | 7.1 | 5.7 Years |
| Manager 8 | 530 | 13.3 | 2.9 | 7.7 | 6 Years |
| Manager 9 | 449 | 6.1 | 4.1 | 7.8 | 3.8 Years |
| Manager 10 | 409 | 8.0 | 4.4 | 8.0 | 3.9 Years |
| Manager 11 | 403 | 3.8 | (6.8) | (0.9) | 1.8 Years |
| Manager 12 | 385 | 6.9 | 2.9 | 7.7 | 6 Years |
| Manager 13 | 381 | (0.4) | 2.9 | 7.7 | 6 Years |
| Manager 14 | 344 | 0.4 | 2.9 | 7.7 | 6 Years |
| Manager 15 | 313 | 4.8 | 2.9 | 7.7 | 6 Years |
| Manager 16 | 275 | 0.4 | (15.4) | (10.9) | 0.8 Years |
| Manager 17 | 216 | (1.1) | 4.4 | 8.0 | 4 Years |
| Manager 18 | 197 | 5.8 | 2.5 | 6.4 | 5.3 Years |
| Manager 19 | 141 | (22.6) | (22.5) | (19.6) | 0.3 Years |
| Manager 20 | 97 | (23.5) | (21.6) | (18.6) | 0.3 Years |

Annualized returns for 6 years since CIO Jagdeep Singh Bachher joined. Where we don't have 6 years of returns, we have used the since inception time period.

Fixed Income

| As of March 31, 2020 Net Returns (%) | Market Value (\$B) | Weight (%) | QTD 3 Months | Fiscal YTD 9 Months | Annualized Returns | | | | | | |
|---|-----------------------|---------------|-----------------|------------------------|--------------------|--------|--------|--------|---------|---------|---------|
| | | | | | 1 Year | 3 Year | 5 Year | 6 Year | 10 Year | 20 Year | 25 Year |
| Fixed Income | 14.4 | 100 | (2.0) | 0.5 | 3.4 | 3.4 | 3.1 | 3.3 | 4.3 | 5.7 | 7.1 |
| Policy Benchmark* | | | (1.0) | 1.7 | 4.9 | 3.7 | 3.2 | 3.5 | 4.3 | 5.7 | 6.3 |
| Value Added | | | (1.0) | (1.2) | (1.5) | (0.3) | (0.1) | (0.2) | - | - | 0.8 |
| Core | 9.8 | 63 | 1.5 | 3.8 | 6.7 | 4.3 | 3.3 | 3.6 | 4.1 | 5.5 | 6.9 |
| Barclays U.S. Aggregate Bond Index | | | 3.1 | 5.7 | 8.9 | 4.8 | 3.4 | 3.7 | 3.9 | 5.4 | 6.1 |
| Value Added | | | (1.6) | (1.9) | (2.2) | (0.5) | (0.1) | (0.1) | 0.2 | 0.1 | 0.8 |
| Active | 8.6 | 55 | 1.9 | 4.1 | 7.1 | 4.4 | 3.4 | 3.7 | 4.2 | - | - |
| Passive | 1.2 | 8 | 3.1 | 5.6 | 8.9 | 4.4 | 3.1 | 3.5 | - | - | - |
| High Yield | 1.9 | 14 | (11.4) | (7.5) | (5.3) | 1.3 | 2.9 | 2.9 | 5.9 | - | - |
| Merrill Lynch High Yield Cash Pay Index | | | (13.1) | (9.7) | (7.4) | 0.6 | 2.7 | 2.6 | 5.5 | - | - |
| Value Added | | | 1.7 | 2.2 | 2.1 | 0.7 | 0.2 | 0.3 | 0.4 | - | - |
| External High Yield | 1.0 | 7 | (13.3) | (9.7) | (7.7) | 0.3 | 2.4 | 2.4 | 5.8 | - | - |
| Internal High Yield | 0.5 | 3 | (12.3) | (8.7) | (5.9) | 1.0 | 2.6 | 2.7 | 5.5 | - | - |
| Emerging Market Debt** | 1.6 | 11 | (13.2) | (10.5) | (6.9) | 0.4 | 2.1 | 2.3 | 3.8 | - | - |
| JPM EM Bond Index Global Diversified | | | (13.4) | (10.5) | (6.8) | 0.4 | 2.8 | 3.3 | 4.6 | - | - |
| Value Added | | | 0.2 | - | (0.1) | - | (0.7) | (1.0) | (0.8) | - | - |
| TIPS | 1.1 | 12 | 1.6 | 3.6 | 6.5 | 3.5 | 2.8 | 2.9 | 3.6 | - | - |
| Barclays U.S. TIPS | | | 1.7 | 3.9 | 6.8 | 3.5 | 2.7 | 2.7 | 3.5 | - | - |
| Value Added | | | (0.1) | (0.3) | (0.3) | - | 0.1 | 0.2 | 0.1 | - | - |

* Total fixed income policy benchmark is an aggregate of underlying portfolio benchmarks.

** Emerging Market Debt: Passive Since May 2017.

Cash

| As of March 31, 2020 Net Returns (%) | Market Value (\$B) | Weight (%) | QTD 3 Months | Fiscal YTD 9 Months | Annualized Returns | | | | | | |
|---|-----------------------|---------------|-----------------|------------------------|--------------------|--------|--------|--------|---------|---------|---------|
| | | | | | 1 Year | 3 Year | 5 Year | 6 Year | 10 Year | 20 Year | 25 Year |
| Cash | 4.5 | 100 | 0.5 | 1.6 | 2.2 | 2.0 | 1.7 | 1.6 | 1.9 | 3.1 | 3.7 |

| As of April 30, 2020 Net Returns (%) | Market Value (\$B) | Weight (%) | QTD 1 Month | Fiscal YTD 9 Months | Annualized Returns | | | | | | |
|---|-----------------------|---------------|----------------|------------------------|--------------------|--------|--------|--------|---------|---------|---------|
| | | | | | 1 Year | 3 Year | 5 Year | 6 Year | 10 Year | 20 Year | 25 Year |
| Cash | 11.0 | 100 | 0.2 | 1.8 | 2.2 | 2.0 | 1.7 | 1.6 | 1.9 | 3.1 | 3.7 |

Absolute Return

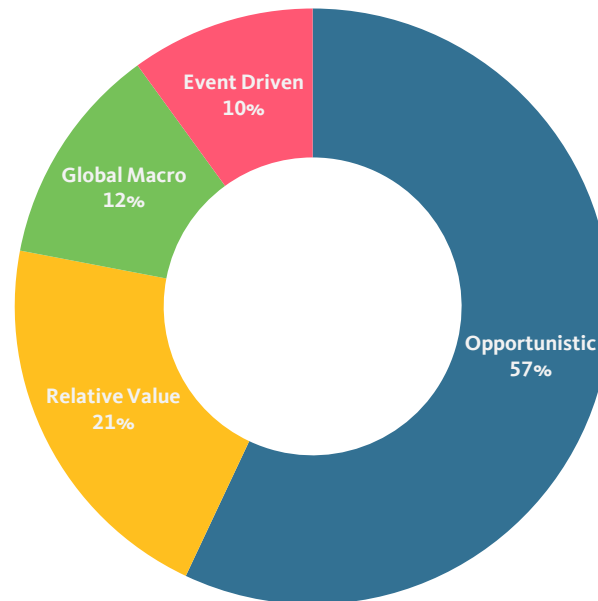
| As of March 31, 2020 Net Returns (%) | Market Value (\$B) | Weight (%) | QTD 3 Months | Fiscal YTD 9 Months | 1 Year | Annualized Returns | | | | Since Inception 12 Year |
|---|-----------------------|---------------|-----------------|------------------------|--------|--------------------|--------|--------|---------|----------------------------|
| | | | | | | 3 Year | 5 Year | 6 Year | 10 Year | |
| Absolute Return | 3.9 | 100 | (11.9) | (8.4) | (5.7) | 1.5 | 1.1 | 2.5 | 4.1 | 3.2 |
| Policy Benchmark* | | | (7.3) | (5.6) | (4.0) | 0.5 | (0.5) | 0.1 | 0.2 | - |
| Value Added | | | (4.6) | (2.8) | (1.7) | 1.0 | 1.6 | 2.4 | 3.9 | - |
| Opportunistic | 2.2 | 57 | (17.1) | (11.4) | (9.2) | 2.1 | 3.4 | 4.4 | - | |
| Relative Value | 0.8 | 21 | 3.5 | 3.5 | 6.7 | 7.5 | 7.1 | 6.7 | 6.4 | |
| Global Macro | 0.5 | 12 | (11.6) | (14.8) | (9.9) | (4.3) | (2.6) | (0.6) | 0.3 | |
| Event Driven | 0.4 | 10 | (8.4) | (2.7) | (1.3) | 5.1 | 2.9 | 3.3 | 5.3 | |

* As of July 1, 2017, the benchmark is HFRI Fund of Funds Composite.

From March 1, 2016 to June 1, 2017, the benchmark was the HFRX Absolute Return.

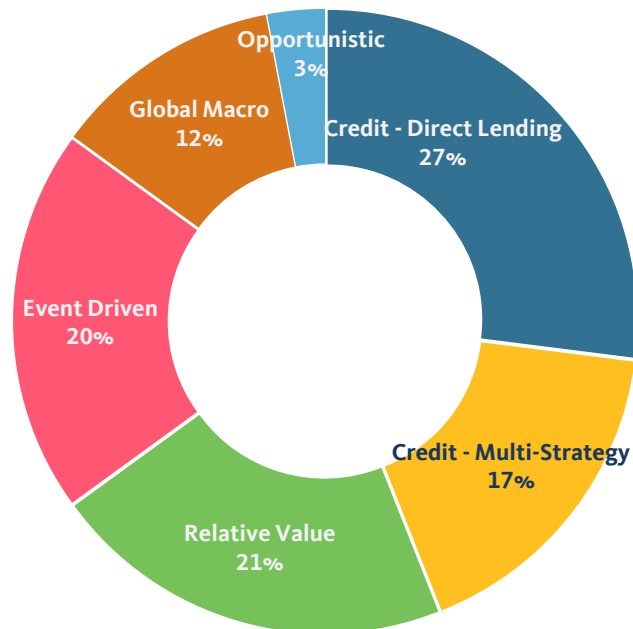
From April 1, 2009 to February 1, 2016, the benchmark was 50% HFRX Absolute Return/50% HFRX Market Directional.

Prior to that, benchmark was the 1 Month T-Bill+4.5%.



Absolute Return

| As of March 31, 2020 Net Returns (%) | Market Value (\$B) | Weight (%) | QTD 3 Months | Fiscal YTD 9 Months | Annualized Returns | | | | | Since Inception 12 Year |
|---|-----------------------|---------------|-----------------|------------------------|--------------------|--------|--------|--------|---------|----------------------------|
| | | | | | 1 Year | 3 Year | 5 Year | 6 Year | 10 Year | |
| Absolute Return | 3.9 | 100 | (11.9) | (8.4) | (5.7) | 1.5 | 1.1 | 2.5 | 4.1 | 3.2 |
| Policy Benchmark | | | (7.3) | (5.6) | (4.0) | 0.5 | (0.5) | 0.1 | 0.2 | - |
| Value Added | | | (4.6) | (2.8) | (1.7) | 1.0 | 1.6 | 2.4 | 3.9 | - |
| Credit – Direct Lending | 1.1 | 27 | (13.4) | (1.2) | 3.0 | 7.4 | - | - | - | |
| Credit – Multi-Strategy | 0.7 | 17 | (27.5) | (26.0) | (24.7) | (4.6) | (0.9) | 0.8 | - | |
| Relative Value | 0.8 | 21 | 3.5 | 3.5 | 6.7 | 7.5 | 7.1 | 6.7 | 6.4 | |
| Event Driven | 0.8 | 20 | (9.1) | (4.7) | (3.8) | 4.9 | 2.8 | 3.2 | 5.3 | |
| Global Macro | 0.5 | 12 | (11.6) | (14.8) | (9.9) | (4.3) | (2.6) | (0.6) | 0.3 | |
| Opportunistic | 0.1 | 2 | 0.7 | (3.0) | 0.3 | 7.1 | - | - | - | |



| External Manager | Credit Strategies | Investment Strategy | NAV (\$M) |
|------------------|-------------------|---|----------------|
| Manager 1 | Direct Lending | European corporate lending. | \$188 |
| Manager 2 | Direct Lending | Consumer and small business specialty finance lending. | \$307 |
| Manager 3 | Direct Lending | U.S. residential real estate credit lending. | \$101 |
| Manager 4 | Direct Lending | U.S. upper middle market corporate direct lending. Vehicle is publicly traded. | \$472 |
| Manager 5 | Multi-Strategy | Structured credit, asset backed and mortgage securities. | \$442 |
| Manager 6 | Multi-Strategy | Structured credit, asset backed and mortgage securities. | \$234 |
| Total | | | \$1,744 |

Private Equity

| As of March 31, 2020 Net Returns (%) | Market Value (\$B) | Weight (%) | QTD 3 Months | Fiscal YTD 9 Months | Annualized Returns | | | | | | |
|---|-----------------------|---------------|-----------------|------------------------|--------------------|--------|--------|--------|---------|---------|---------|
| | | | | | 1 Year | 3 Year | 5 Year | 6 Year | 10 Year | 20 Year | 25 Year |
| Private Equity | 4.2 | 100 | 2.9 | 4.4 | 14.2 | 14.2 | 12.5 | 12.4 | 13.4 | 8.9 | 18.0 |
| Policy Benchmark* | | | (20.5) | (11.4) | (7.5) | 6.2 | 7.7 | 8.4 | 11.0 | 6.5 | 11.4 |
| Value Added | | | 23.4 | 15.8 | 21.7 | 8.0 | 4.8 | 4.0 | 2.4 | 2.4 | 6.6 |
| Buyout | 1.3 | 30 | 1.8 | 2.0 | 11.4 | 9.5 | 11.0 | 10.8 | 12.0 | 31.2 | - |
| Opportunistic | 0.9 | 21 | 3.8 | 8.5 | 14.5 | 7.8 | 5.1 | (0.3) | 15.1 | 10.4 | - |
| Venture Capital | 0.7 | 18 | 1.8 | (0.1) | 10.1 | 15.0 | 11.0 | 12.5 | 13.2 | - | - |
| Co-Invest | 0.7 | 16 | 6.8 | 17.4 | 35.9 | 33.4 | 29.1 | 30.3 | 27.0 | - | - |
| Growth | 0.6 | 15 | 2.0 | (2.6) | 7.3 | 10.0 | 8.6 | 6.9 | 11.8 | (5.7) | - |

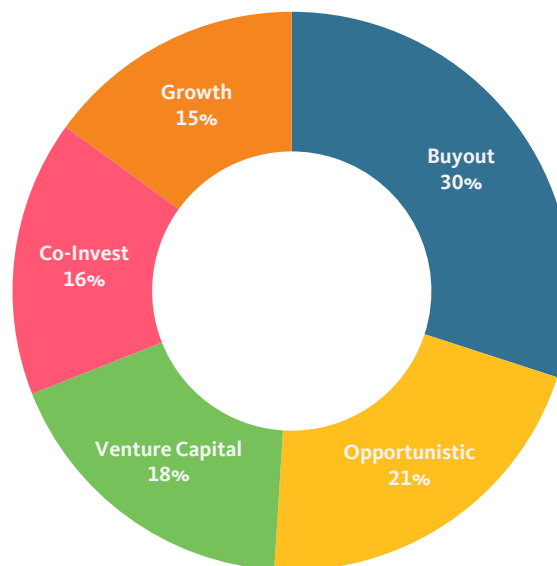
* As of July 1, 2019, the Private Equity policy benchmark is the Russell 3000 +2.0%.

From July 1, 2017 to June 30, 2019, the Private Equity policy benchmark is the Russell 3000 +1.5%.

From March 2005 to June 2017, the Private Equity benchmark was the actual private equity return.

From January 2001 to February 2005, the Private Equity benchmark was Russell 3000 + 3% lagged one quarter.

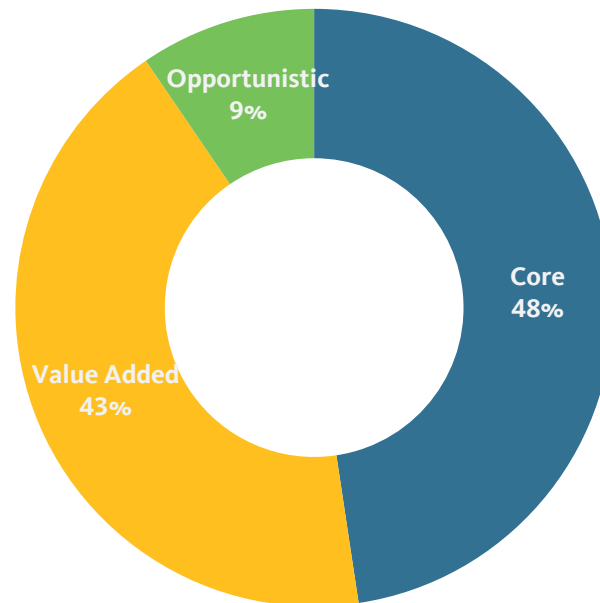
Prior to that, it was the S&P 500 + 5% lagged by a quarter.



Real Estate

| As of March 31, 2020 Net Returns (%) | Market Value (\$B) | Weight (%) | QTD 3 Months | Fiscal YTD 9 Months | Annualized Returns | | | | | Since Inception 14 Year |
|---|-----------------------|---------------|-----------------|------------------------|--------------------|--------|--------|--------|---------|----------------------------|
| | | | | | 1 Year | 3 Year | 5 Year | 6 Year | 10 Year | |
| Real Estate | 4.3 | 100 | 2.2 | 2.7 | 6.5 | 7.2 | 8.6 | 9.6 | 11.6 | 4.8 |
| Policy Benchmark* | | | 1.3 | 3.2 | 4.4 | 6.1 | 8.1 | 8.6 | 10.6 | - |
| Value Added | | | 0.9 | (0.5) | 2.1 | 1.1 | 0.5 | 1.0 | 1.0 | - |
| Core | 2.0 | 48 | 2.8 | 3.9 | 7.9 | 7.9 | 9.2 | 9.7 | 10.9 | - |
| Value Added | 1.8 | 43 | 2.2 | 2.0 | 6.4 | 6.5 | 9.3 | 9.3 | 8.8 | - |
| Opportunistic | 0.4 | 9 | 0.0 | 0.5 | 0.7 | 1.6 | 5.2 | 6.8 | 10.2 | - |

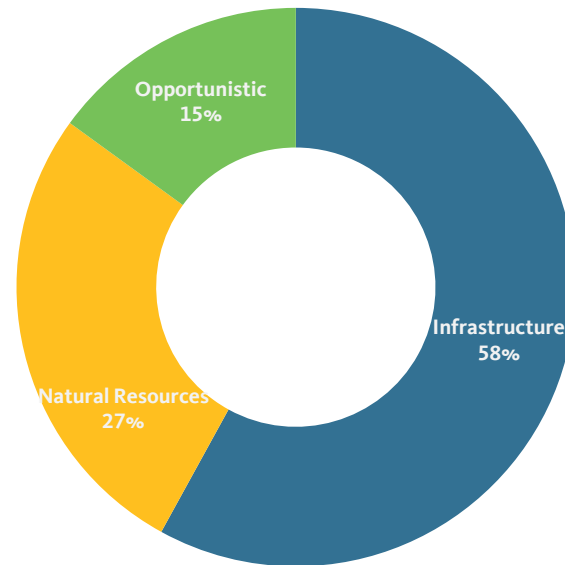
* As of April 1, 2011, the Real Estate policy benchmark is the NCREIF ODCE Index (lagged 3 months).



Real Assets

| As of March 31, 2020 Net Returns (%) | Market Value (\$B) | Weight (%) | QTD 3 Months | Fiscal YTD 9 Months | Annualized Returns | | | | Since Inception 10 Year |
|---|-----------------------|---------------|-----------------|------------------------|--------------------|--------|--------|--------|----------------------------|
| | | | | | 1 Year | 3 Year | 5 Year | 6 Year | |
| Real Assets | 2.1 | 100 | 2.1 | 3.9 | 9.6 | 6.0 | 0.4 | 1.2 | 5.0 |
| Infrastructure | 1.2 | 58 | 3.2 | 7.1 | 15.6 | 12.3 | 11.9 | 13.2 | - |
| Natural Resources | 0.6 | 27 | 1.1 | 0.2 | 2.3 | (0.6) | (7.3) | (5.3) | - |
| Opportunistic | 0.3 | 15 | 0.0 | 1.3 | 6.8 | 7.2 | 4.2 | 4.2 | - |

* Inception date for Real Assets is April 1, 2010.
The Real Assets policy benchmark is itself, the Real Assets portfolio.



Risk Measurement

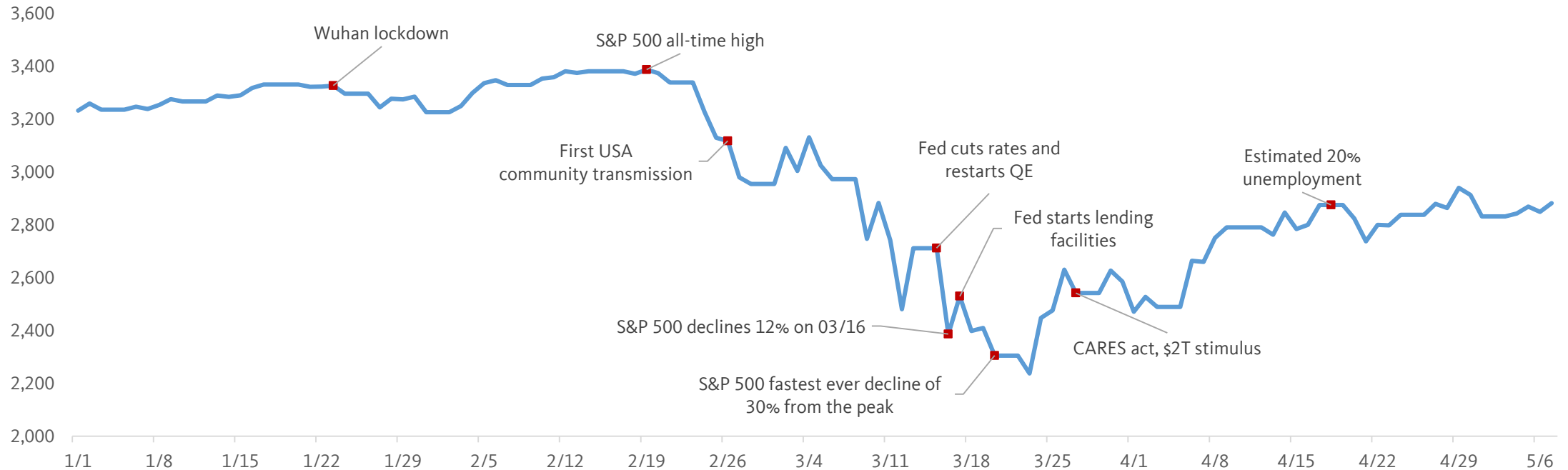
All asset classes and their benchmarks have increased risk and tracking error due to unprecedented market volatility in February and March 2020. Overall tracking error increased 0.1%.

| Portfolio | Benchmark | Weight (%) | Portfolio Risk (%) | | Benchmark Risk (%) | | Active Risk (%) | |
|------------------------|----------------------|------------|-----------------------|------------|-----------------------|------------|-----------------|------------|
| | | | Standalone Volatility | QoQ Change | Standalone Volatility | QoQ Change | Tracking Error | QoQ Change |
| Pension | Policy (Blend) | 100 | 22.6 | 14.6 | 22.3 | 14.4 | 0.9 | 0.1 |
| Public Equity | MSCI ACWI ex Tobacco | 48 | 28.7 | 16.5 | 29.5 | 17.4 | 1.2 | 0.5 |
| Fixed Income | Policy (Blend) | 22 | 9.9 | 7.5 | 9.9 | 7.1 | 0.9 | 0.4 |
| Absolute Return | HFRI FOF | 6 | 9.9 | 4.7 | 8.7 | 6.5 | 4.4 | 0.3 |
| Private Equity | Russell 3000 | 6 | 42.4 | 25.1 | 30.4 | 16.8 | 14.2 | 7.2 |
| Real Estate | NFI-ODCE | 7 | 34.8 | 24.5 | 27.2 | 17.7 | 8.4 | 0.0* |
| Real Assets | Real Assets | 3 | 44.0 | 25.9 | 44.0 | 25.9 | 0.0 | 0.0 |
| Cash | Merrill Lynch 3M | 7 | 0.1 | (0.0) | 0.2 | 0.1 | 0.2 | 0.1 |

* Real Estate risk model changed during 2020 Q1 hence the QoQ change is reflecting the new methodology.

Risk: Covid-19 Themes

S&P 500 from January 1, 2020



We have passed through an acute stage of market dislocation

- A month of jarring market decline and volatility.
- Aggressive and rapid Fed intervention and government stimulus.
- A surprising level of market stability in April, and a market that suggests nothing out of the ordinary in May.

And are facing a period of chronic market risk today

- A bimodal risk picture with prospects that are either very good or very bad: a return to normalcy, or a second wave.
- Asymmetric risk; greater downside potential.

Risk 3.0: Managing the Dynamics of Market Vulnerability

Well before the Covid crisis, our Risk 3.0 framework indicated market dynamics with underlying vulnerability, e.g.:

- Growing leverage
- Constricted liquidity
- High concentration
- Aggressive risk sentiment

No one could predict when or how an event might strike that vulnerability, but we managed our risk with that in mind.

The market dislocations in March were an anticipated dynamic given the Covid-19 event, although the severity was surprising.

