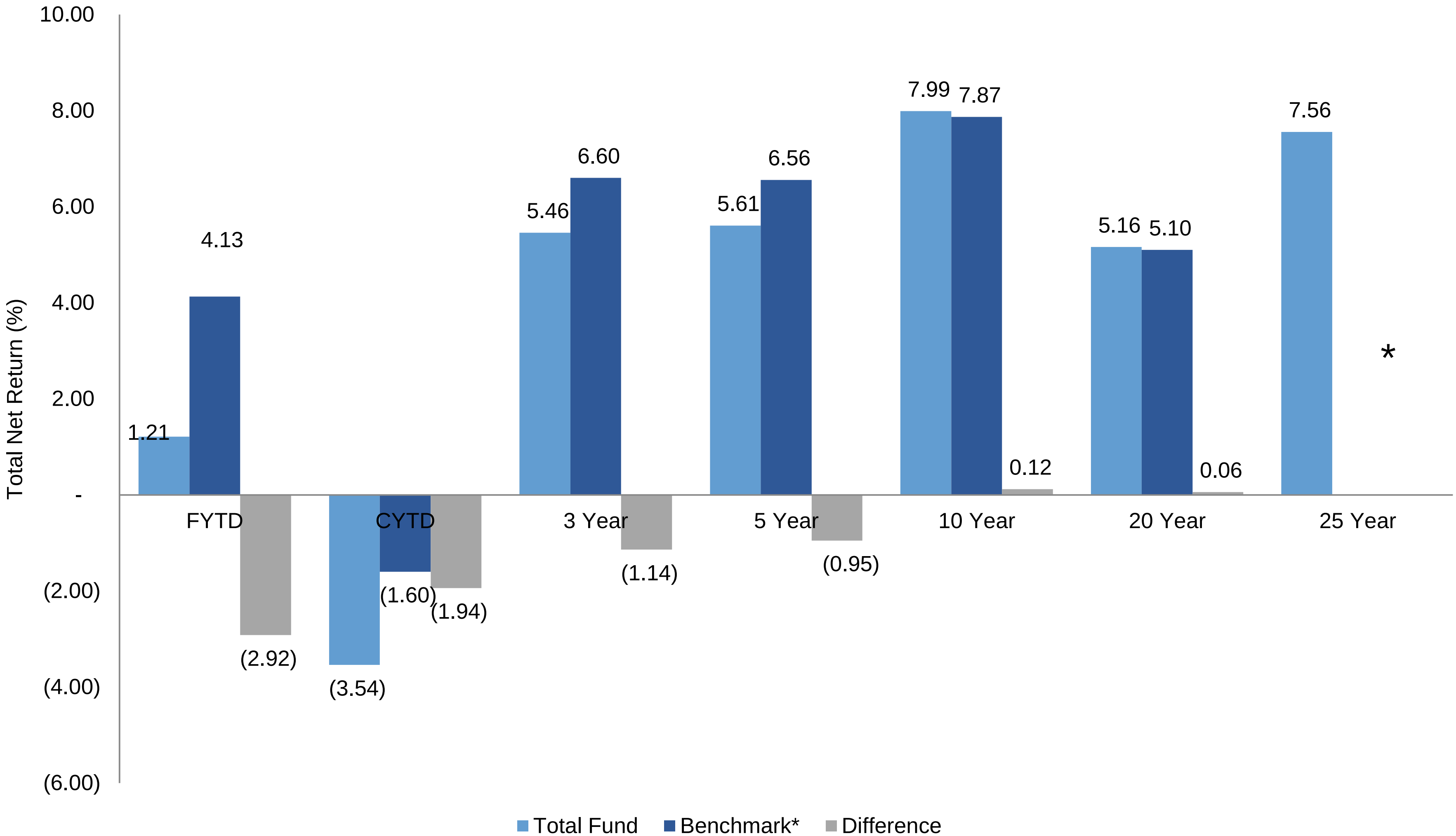
# NJ DIVISION OF INVESTMENT

## Director's Report

State Investment Council
September 30, 2020

***"The mission of the New Jersey Division of Investment is to achieve the best possible return at an acceptable level of risk using the highest fiduciary standards."***

# Pension Fund Net Returns[1] for Periods Ending June 30, 2020




(1) Returns are preliminary, unaudited, net of all fees, and exclude Police and Fire Mortgage Program. Benchmark returns for certain private market asset classes are calculated on a lagged basis. This results in performance comparisons that may be less meaningful.

* Benchmark return not available for 25-Year period

# FY21 Public Market Update: Asset Allocation and Net Returns (August 31, 2020)

ASSET ALLOCATION

| Asset Class | As of August 31, 2020 Mkt Value (in $ millions) | Actual (%) | Target (%) | FYTD through August 31, 2020 NJ | Benchmark |
|---|---|---|---|---|---|
| **GLOBAL GROWTH** | | | | | |
| US Equities | 23,750 | 30.06% | 28.00% | 13.37% | 13.36% |
| Non-US Developed Market Equities | 9,811 | 12.42% | 12.50% | 8.18% | 7.87% |
| Emerging Market Equities | 5,461 | 6.91% | 6.50% | 11.33% | 11.41% |
| **INCOME** | | | | | |
| Investment Grade Credit | 6,821 | 8.63% | 10.00% | 1.32% | 1.23% |
| High Yield | 1,073 | 1.36% | 2.00% | 5.97% | 5.66% |
| **DEFENSIVE** | | | | | |
| U.S. Government | 3,853 | 4.88% | 5.00% | -0.04% | 0.03% |

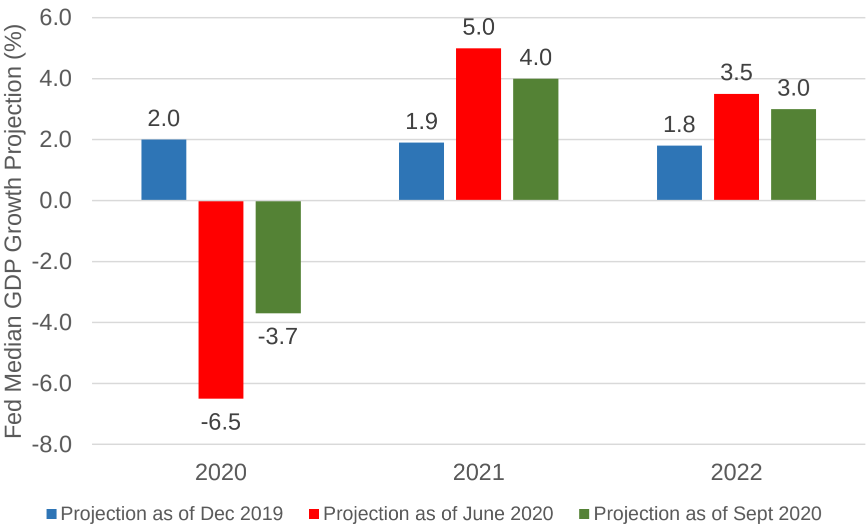
# Capital Markets Update (through August 31, 2020)

| | Fiscal YTD | Calendar YTD | One Year | Three Years (Annualized) | Five Years (Annualized) |
|---|---|---|---|---|---|
| Global Equity Index | | | | | |
| MSCI ALL Country World Index | 11.74 | 4.75 | 16.53 | 8.98 | 10.20 |
| US Equity Indices | | | | | |
| Russell 3000 | 13.33 | 9.39 | 21.43 | 13.92 | 13.83 |
| Russell 1000 | 13.63 | 10.43 | 22.49 | 14.56 | 14.28 |
| Russell 2000 | 8.56 | -5.54 | 6.00 | 5.00 | 7.62 |
| Russell Growth | 18.27 | 28.89 | 42.58 | 23.27 | 19.92 |
| Russell Value | 8.21 | -9.91 | 0.36 | 4.09 | 7.31 |
| Non-US Equity Indices | | | | | |
| MSCI EAFE | 7.59 | -4.61 | 6.13 | 2.34 | 4.72 |
| MSCI Emerging Markets | 11.34 | 0.45 | 14.49 | 2.83 | 8.65 |
| Fixed Income & Credit Indices | | | | | |
| Bloomberg Barclays U.S. Aggregate | 0.67 | 6.85 | 6.47 | 5.09 | 4.32 |
| Bloomberg Barclays U.S. Treasury | 0.03 | 8.75 | 6.98 | 5.15 | 3.90 |
| Bloomberg Barclays U.S. Credit | 1.78 | 6.68 | 7.10 | 6.20 | 5.90 |
| Bloomberg Barclays U.S. Credit (A or better) | 1.23 | 7.77 | 7.45 | 5.99 | 5.46 |
| Bloomberg Barclays U.S. Credit (BBB) | 2.45 | 5.55 | 6.79 | 6.48 | 6.47 |
| Bloomberg Barclays U.S. High Yield | 5.68 | 1.67 | 4.71 | 4.88 | 6.44 |
| S&P/LSTA Leveraged Loan Index | 3.48 | -1.29 | 0.89 | 3.02 | 3.74 |
| Wells Fargo BDC Index | 5.13 | -24.04 | -19.16 | -3.04 | 1.57 |
| Real Estate Index | | | | | |
| Bloomberg U.S. REIT Index | 4.00 | -10.25 | -8.34 | 3.63 | 7.48 |
| Real Assets & Commodities Indices | | | | | |
| Bloomberg Commodities Index | 12.83 | -9.36 | -4.79 | -4.68 | -4.21 |
| Bloomberg Energy Subindex | 15.44 | -37.99 | -33.66 | -11.96 | -14.04 |
| Alerian MLP Index | -3.05 | -37.67 | -39.79 | -16.58 | -11.91 |

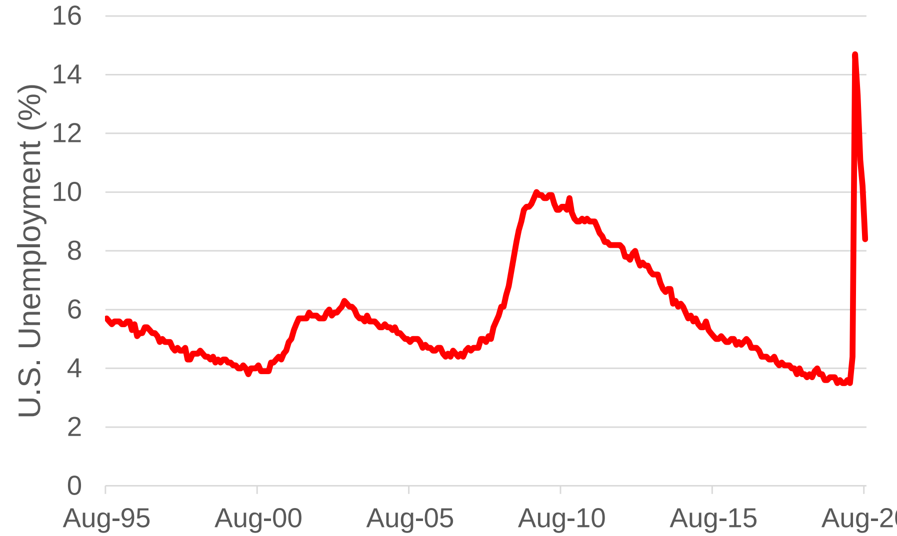
Source: Bloomberg

# The Outlook for the U.S. Economy Remains Uncertain

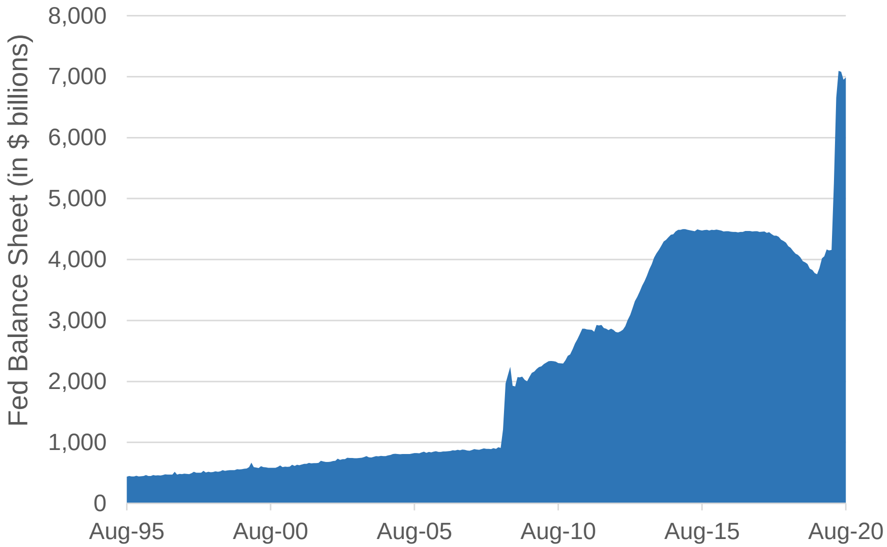
## Federal Reserve Economic Projections




## U.S. Unemployment




## Federal Reserve Balance Sheet

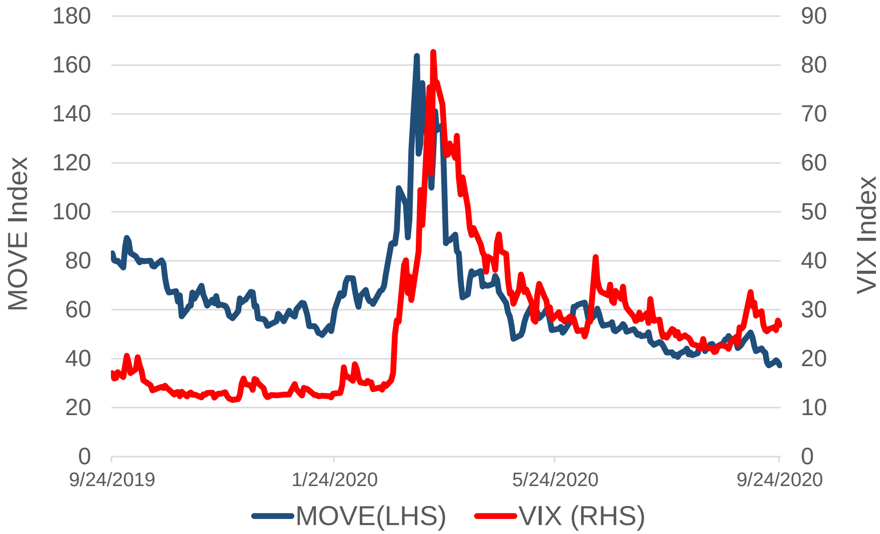



## Treasury Yields and Credit Spreads


Source: Bloomberg and Federal Reserve

# U.S. Equities Have Rebounded Sharply Since the March Lows

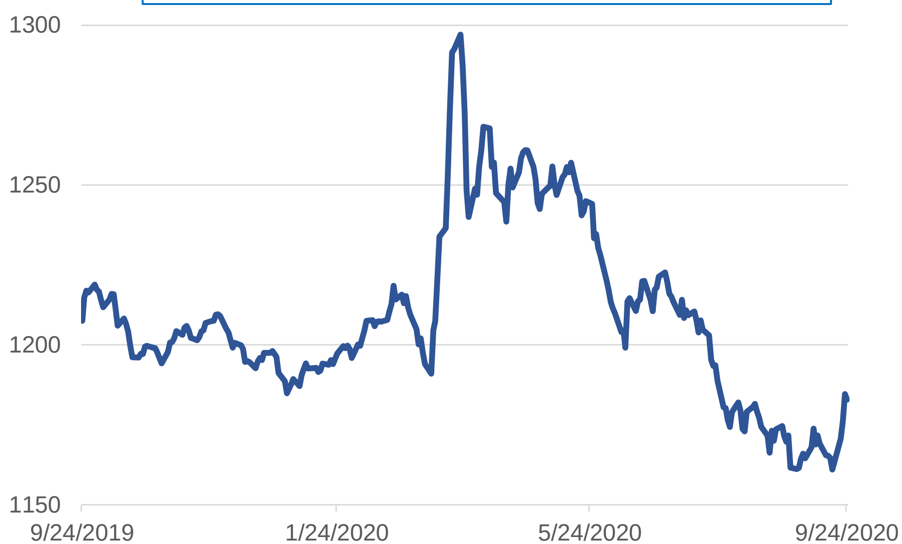
## Equity and Bond Market Volatility




## U.S. Equity Valuations


## Mega-Cap Equities Outperformed


## The U.S. Dollar Weakened




Source: Bloomberg

# Asset Allocation and Net Returns by Asset Class (June 30, 2020)

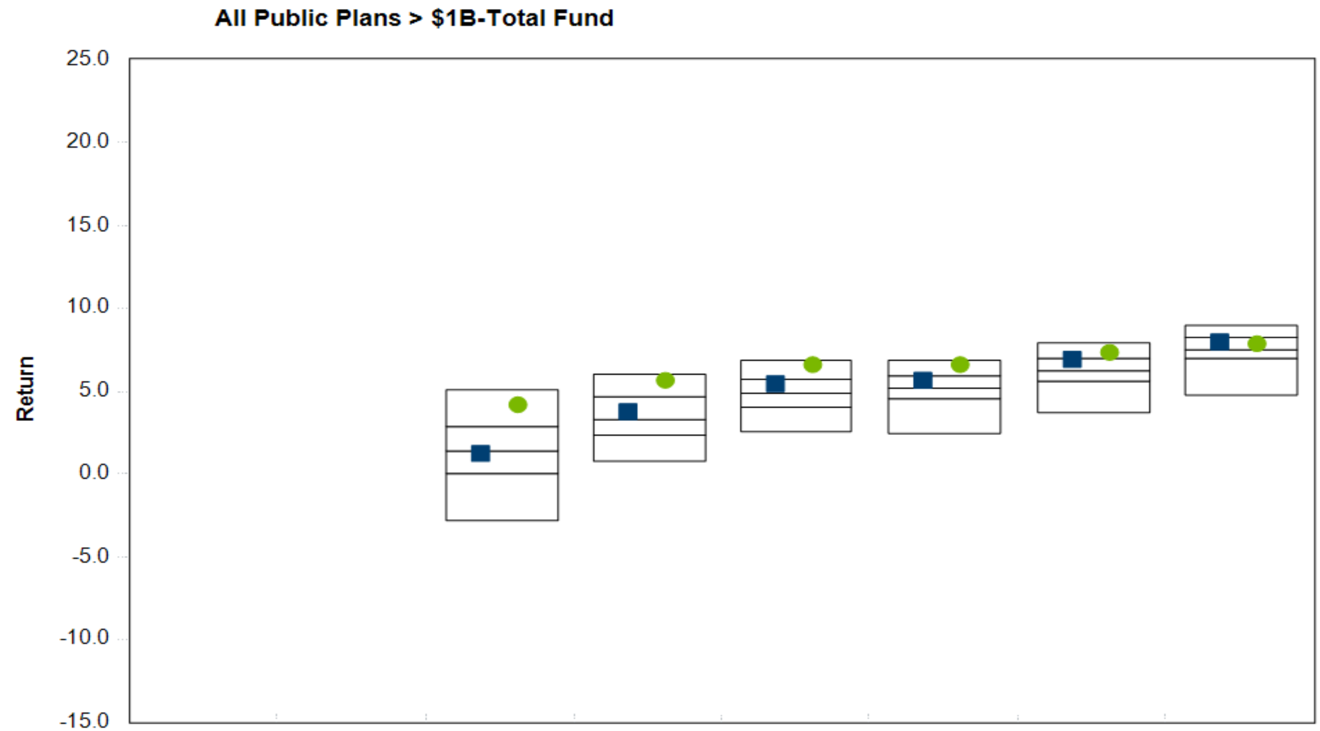
| | ASSET ALLOCATION As of June 30, 2020 | | | | PERFORMANCE (for periods ending June 30, 2020)[1] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | FY20 | | Trailing Five Years | | Trailing Seven Years | | Trailing Ten Years | |
| **Asset Class** | **Mkt Value ($ millions)** | **Actual (%)** | **Target (%)** | **Difference** | **NJ** | **Bench** | **NJ** | **Bench** | **NJ** | **Bench** | **NJ** | **Bench** |
| **GLOBAL GROWTH** | | | | | | | | | | | | |
| US Equities | 21,005 | 27.84% | 28.00% | -0.16% | 6.02% | 7.05% | 8.74% | 10.40% | 10.90% | 11.88% | 13.26% | 13.86% |
| Non-US Developed Market Equities | 9,094 | 12.05% | 12.50% | -0.45% | -4.09% | -5.51% | 2.46% | 1.97% | 4.27% | 3.78% | 5.17% | |
| Emerging Market Equities | 4,906 | 6.50% | 6.50% | 0.00% | -4.67% | -3.01% | 2.39% | 3.04% | | | | |
| Private Equity | 8,476 | 11.24% | 12.00% | -0.76% | 0.89% | 1.42% | 9.57% | 10.10% | 13.08% | 11.53% | | |
| Equity-Oriented HFs | 50 | 0.07% | 0.00% | 0.07% | -7.67% | -2.81% | -1.31% | 1.09% | 1.78% | 3.08% | | |
| **TOTAL GLOBAL GROWTH** | **43,531** | **57.70%** | **59.00%** | **-1.30%** | **1.63%** | **3.22%** | **6.64%** | **7.89%** | **8.59%** | **9.14%** | | |
| **REAL RETURN** | | | | | | | | | | | | |
| Real Assets | 1,689 | 2.24% | 2.50% | -0.26% | -19.41% | -20.07% | -1.67% | -3.20% | -1.42% | -2.64% | | |
| Real Estate | 4,804 | 6.37% | 7.50% | -1.13% | -3.42% | 3.93% | 7.56% | 7.48% | 9.84% | 8.91% | | |
| **TOTAL REAL RETURN** | **6,493** | **8.61%** | **10.00%** | **-1.39%** | **-8.21%** | **-2.47%** | **4.72%** | **4.40%** | **5.97%** | **5.09%** | | |
| **INCOME** | | | | | | | | | | | | |
| Investment Grade Credit | 6,819 | 9.04% | 10.00% | -0.96% | 10.46% | 9.92% | 5.32% | 5.34% | 5.11% | 4.79% | 5.56% | 4.90% |
| High Yield | 1,031 | 1.37% | 2.00% | -0.63% | -0.92% | 0.00% | 4.73% | 4.78% | | | | |
| Private Credit | 5,689 | 7.54% | 6.00% | 1.54% | -3.64% | 2.33% | 6.07% | 5.31% | 7.55% | | 9.76% | |
| **TOTAL INCOME** | **13,539** | **17.95%** | **18.00%** | **-0.05%** | **3.18%** | **5.95%** | **5.09%** | **5.25%** | **5.46%** | **5.05%** | | |
| **DEFENSIVE** | | | | | | | | | | | | |
| Cash Equivalents | 5,174 | 6.86% | 5.00% | 1.86% | 1.91% | 1.63% | 1.79% | 1.19% | 1.51% | 0.86% | 1.40% | 0.64% |
| U.S. Government | 3,613 | 4.79% | 5.00% | -0.21% | 10.67% | 10.45% | 3.56% | 3.99% | 2.80% | 3.77% | 4.34% | 3.79% |
| Risk Mitigation Strategies | 2,434 | 3.23% | 3.00% | 0.23% | 1.68% | 4.74% | 2.55% | 4.27% | 2.58% | 3.92% | | |
| **TOTAL DEFENSIVE** | **11,222** | **14.88%** | **13.00%** | **1.88%** | **4.40%** | **5.46%** | **2.44%** | **2.36%** | | | | |
| **OTHER** | | | | | | | | | | | | |
| **OPPORTUNISTIC PE** | 483 | 0.64% | | | 8.19% | 1.42% | 5.82% | 10.10% | | | | |
| **OTHER** | 170 | 0.23% | | | | | | | | | | |
| **TOTAL FUND [2]** | **75,438** | **100.00%** | | | **1.21%** | **4.13%** | **5.61%** | **6.56%** | **6.92%** | **7.30%** | **7.99%** | **7.87%** |

(1) Returns are preliminary, unaudited, and net of all fees

(2) Total Pension Fund excludes Police and Fire Mortgage Program

Notes: Sum of components may not equal totals due to rounding. Benchmark returns for certain private market asset classes are calculated on a lagged basis. This results in performance comparisons that may be less meaningful.

# Pension Fund Peer Returns Comparison




| | 1 Year | 2 Years | 3 Years | 5 Years | 7 Years | 10 Years |
|---|---|---|---|---|---|---|
| ■ Total Pension ex Police and Fire Mortgages W/Hedges | 1.2 (59) | 3.7 (42) | 5.5 (32) | 5.6 (39) | 6.9 (26) | 8.0 (35) |
| ● NJDOI Policy Benchmark | 4.1 (12) | 5.6 (9) | 6.6 (10) | 6.6 (11) | 7.3 (13) | 7.9 (38) |
| 5th Percentile | 5.1 | 6.1 | 6.9 | 6.8 | 8.0 | 9.0 |
| 1st Quartile | 2.9 | 4.7 | 5.8 | 5.9 | 7.0 | 8.2 |
| Median | 1.4 | 3.3 | 4.9 | 5.2 | 6.2 | 7.6 |
| 3rd Quartile | 0.0 | 2.4 | 4.0 | 4.6 | 5.7 | 7.0 |
| 95th Percentile | -2.7 | 0.8 | 2.6 | 2.4 | 3.7 | 4.8 |
| Population | 143 | 141 | 141 | 139 | 136 | 132 |

Universe comprised of Total Fund portfolio returns, net of fees, of public defined benefit plans > $1B calculated and provided by BNY Mellon Performance & Risk Analytics and Investment Metrics.

Source: Aon

Empower Results®

# STATE INVESTMENT COUNCIL MEETING

Fiscal Year 2020 Performance Review

September 30, 2020

# Global Equity Portfolio
## Review and Outlook

Suzanne Hannigan
Melanie Lomas
Todd Rowohlt

| | ASSET ALLOCATION As of June 30, 2020 | | | PERFORMANCE (for periods ending June 30, 2020)[1] FY20 | | Trailing Five Years | | Trailing Seven Years | | Trailing Ten Years | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Asset Class** | **Mkt Value ($ millions)** | **Actual (%)** | **Target (%)** | **NJ** | **Bench** | **NJ** | **Bench** | **NJ** | **Bench** | **NJ** | **Bench** |
| US Equities | 21,005 | 27.84% | 28.00% | 6.02% | 7.05% | 8.74% | 10.40% | 10.90% | 11.88% | 13.26% | 13.86% |
| Non-US Dev Market Equities | 9,094 | 12.05% | 12.50% | -4.09% | -5.51% | 2.46% | 1.97% | 4.27% | 3.78% | 5.17% | |
| Emerging Market Equities | 4,906 | 6.50% | 6.50% | -4.67% | -3.01% | 2.39% | 3.04% | | | | |

# FY20 U.S. Equity Portfolio Review and Outlook

- **During FY20, the U.S. Equity Portfolio returned +6.02% versus +7.05% for the benchmark**
  - absolute returns were driven by strong appreciation in mega cap technology names, as well as moderate increases in consumer discretionary and health care sectors. The financial and energy sectors experienced double digits declines.
  - underperformance was attributable to active management during the first quarter of FY20, ahead of a transition to a passive strategy
    - the actively managed portfolio had an above market allocation to value and to small cap stocks
      - concentrated positions in underperforming small cap stocks were reduced over time to avoid market impact
      - relative returns were also impacted by a benchmark mismatch as the portfolio transitioned to a passive strategy
  - the U.S. equity portfolio is now passively managed versus the MSCI USA Investable Market Index, with returns in line with the benchmark index

- **Looking ahead into FY21, the U.S. Equity Portfolio is positioned in line with the broader market:**
  - important dynamics in the coming quarters include the evolution of the COVID-19 pandemic, future fiscal and monetary policy, the U.S election, and the pace of economic recovery.
  - the U.S. Equity portfolio remains well-diversified, in-line with the MSCI USA IMI benchmark

# FY20 U.S. Equity Portfolio Review and Outlook

## Sector and Security Returns

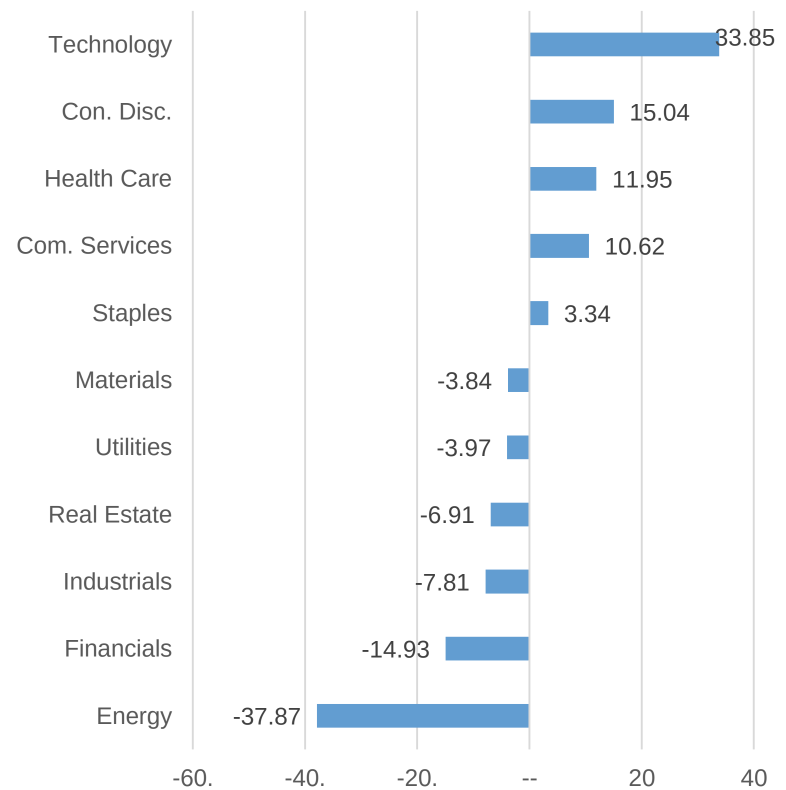
### FY20: Largest Contributors to Returns

| Name | Avg. Weight | Return | Contribution to Return |
|---|---|---|---|
| Apple Inc. | 4.09 | 86.51 | 2.59 |
| Microsoft Corporation | 3.87 | 53.80 | 1.94 |
| Amazon.com, Inc. | 2.84 | 45.69 | 1.49 |
| NVIDIA Corporation | 0.47 | 131.98 | 0.49 |
| Tesla Inc | 0.23 | 383.22 | 0.39 |

### FY20: Largest Detractors from Returns

| Name | Avg. Weight | Return | Contribution to Return |
|---|---|---|---|
| Exxon Mobil Corporation | 0.86 | -38.12 | -0.38 |
| Boeing Company | 0.51 | -48.74 | -0.36 |
| Wells Fargo & Company | 0.60 | -43.07 | -0.29 |
| Berkshire Hathaway Inc. C | 0.91 | -16.26 | -0.18 |
| Chevron Corporation | 0.69 | -24.95 | -0.18 |

### Sector – FY20 Returns




Source: FactSet

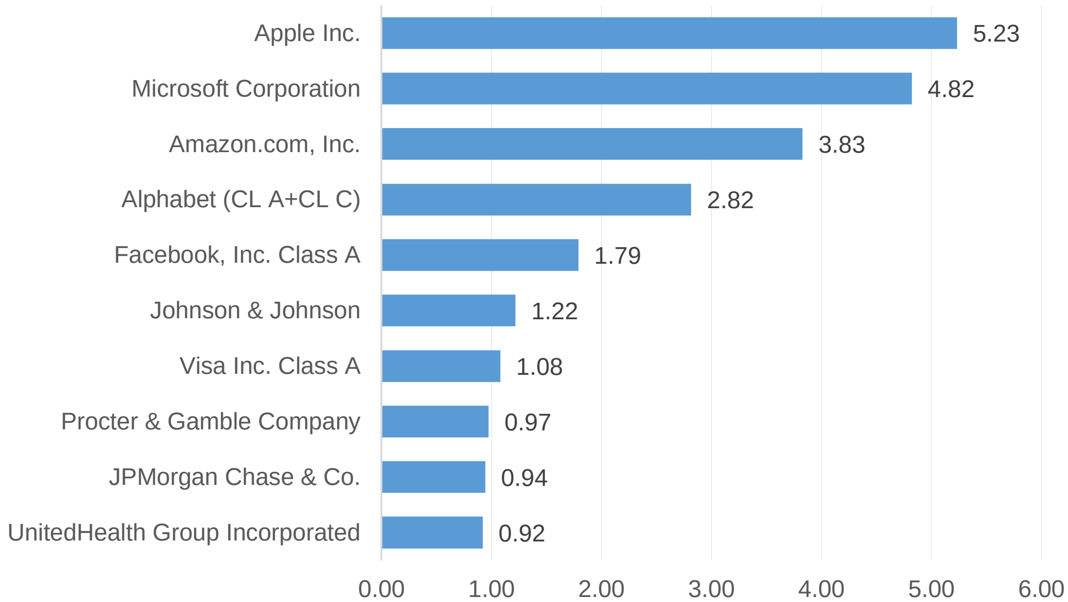
# FY20 U.S. Equity Portfolio Review and Outlook

As of June 30, 2020

## U.S. Equity Portfolio – Key Metrics

| | P/E | P/CF | P/Book |
|---|---|---|---|
| U.S. Equity Portfolio | 24.1 | 12.4 | 3.1 |
| MSCI USA IMI | 24.1 | 12.3 | 3.1 |

## Top Holdings
## End Weight (%)




Source: FactSet

# FY20 International Equity Portfolio Review and Outlook

- **During FY20, the International Equity portfolio returned -4.36% versus -4.53% for the benchmark**
  - favorable relative returns were driven by the Non-U.S. Developed Markets (DM) portfolio, which outperformed its benchmark by 142 basis points (-4.09% vs. -5.51%)
  - the Emerging Market (EM) portfolio adversely impacted relative returns, underperforming its benchmark by 166 basis points (-4.67% vs. -3.01%)

- **Security Selection within small cap strategies was the key drivers of favorable relative returns**
  - the DM portfolio includes an allocation to out-of-benchmark small cap equities as part of a long-term strategic allocation
    - strong security selection in small cap equities (+3.70% vs. -4.23%) notably contributed to favorable relative returns
  - the passively-managed portion of the DM portfolio also benefits from the Fund's favorable tax status, as the Fund is exempt from portions of dividend withholding taxes in certain jurisdictions
  - within the EM portfolio, the Value strategies were the largest detractors to returns

- **Looking ahead into FY21, relative valuations appear attractive but economic and geopolitical risks persist**
  - investor sentiment and sector allocations have favored US markets
  - more recently, developed market economies in Asia appear somewhat better poised to rebound relative to the U.S.
  - Brexit uncertainty persists, representing a key risk to European equity returns
  - while emerging market equities have participated in the global rally, the rally has been driven largely by strong returns in China

# FY20 International Equity Portfolio Review and Outlook

## FY20 International Equity Returns By Asset Class

(Total Return in %)

| Portfolio | Quarter Ended | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 9/30/2019 | | 12/31/2019 | | 3/31/2020 | | 6/30/2020 | | Fiscal Year 2020 | |
| | NJDOI | Benchmark | NJDOI | Benchmark | NJDOI | Benchmark | NJDOI | Benchmark | NJDOI | Benchmark |
| Non-US Developed Markets | -0.86 | -0.87 | 8.20 | 7.73 | -23.05 | -23.15 | 16.19 | 15.14 | -4.09 | -5.51 |
| Emerging Markets | -4.03 | -4.20 | 11.73 | 11.89 | -24.68 | -23.47 | 18.04 | 18.23 | -4.67 | -3.01 |
| Total International Equity | -2.00 | -2.06 | 9.45 | 9.15 | -23.64 | -23.17 | 16.77 | 16.25 | **-4.36** | **-4.53** |

During FY20, the International Equity Portfolio outperformed its benchmark by 17 basis points (-4.36% vs. -4.53%), driven by favorable relative returns within the Non-US Developed Markets Portfolio. The Emerging Markets Equity Portfolio underperformed its benchmark by -1.66%.

Source: State Street

# FY20 International Equity Portfolio Review: Non-US Small Cap (SC) Portfolio

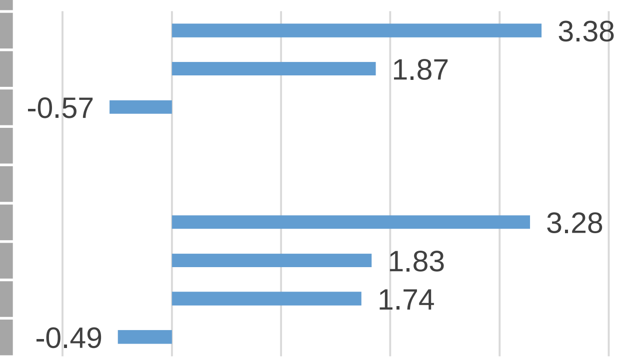
The Non-US Small Cap Portfolio (SC) realized strong absolute and relative returns for the fiscal year.

The Portfolio outperformed both the small cap benchmark by 793 basis points (+3.70% vs. -4.23%) and the Non-US Developed Markets Policy Benchmark by 921 basis points (+3.70% vs. -5.51%).

Security selection and position concentration were the key factors that drove performance.

## Key Drivers of Relative Returns for the Non-US Small Cap Portfolio

| | Avg. Benchmark Weight (%) | Avg. Relative Weight (%) | Benchmark Return (%) | Relative Return (%) | Total Effect (%) |
|---|---|---|---|---|---|
| Country | | | | | |
| Japan | 22.63 | 3.76 | 1.13 | 10.37 | 3.38 |
| China | 2.46 | 0.32 | -4.51 | 79.72 | 1.87 |
| Taiwan | 4.45 | -2.32 | 20.18 | -2.25 | -0.57 |
| | | | | | |
| Sector | | | | | |
| Information Technology | 11.12 | 7.42 | 18.99 | 6.24 | 3.28 |
| Industrials | 19.30 | 0.42 | -8.90 | 9.10 | 1.83 |
| Consumer Discretionary | 12.18 | -1.78 | -10.23 | 15.37 | 1.74 |
| Materials | 10.03 | -4.67 | 1.73 | -0.12 | -0.49 |




Overweight country allocations and superior security selection in Japan and China, specifically within Information Technology, Industrials, Consumer Discretionary and Consumer Staples, were primary drivers of the portfolio's favorable relative returns.

Positive sector allocation and superior security selection in Information Technology, Industrials and Consumer Discretionary contributed nearly 7% to relative returns, while the portfolio's underweight allocation to Materials, one of the best performing sectors, detracted from performance.

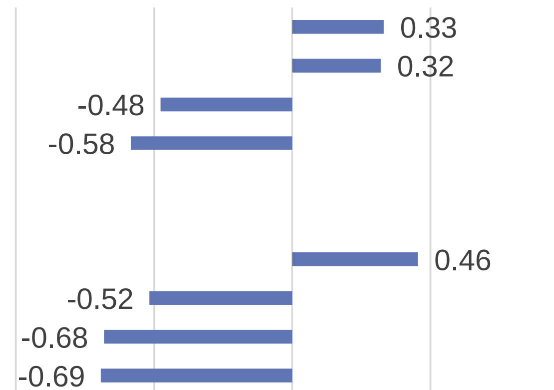
Source: State Street and FactSet

# FY20 International Equity Portfolio Review: Emerging Markets (EM) Portfolio

The EM equity portfolio underperformed the benchmark index by 1.66% (-4.67% vs -3.01%) for the fiscal year

## Key Drivers of Relative Returns for the EM Portfolio

| | Avg. Benchmark Weight (%) | Avg. Relative Weight (%) | Benchmark Return (%) | Relative Return (%) | Total Effect (%) |
|---|---|---|---|---|---|
| Country | | | | | |
| Argentina | 0.18 | 0.47 | -46.50 | 64.07 | 0.33 |
| Taiwan | 11.97 | -1.06 | 21.88 | 4.65 | 0.32 |
| India | 8.45 | 0.03 | -16.25 | -4.85 | -0.48 |
| South Africa | 4.67 | 0.20 | -25.01 | -7.66 | -0.58 |
| | | | | | |
| Sector | | | | | |
| Materials | 7.23 | -2.86 | -13.49 | 3.93 | 0.46 |
| Consumer Staples | 6.66 | -0.92 | -8.49 | -8.07 | -0.52 |
| Financials | 23.47 | -1.49 | -25.04 | -3.82 | -0.68 |
| Health Care | 3.11 | -1.31 | 34.71 | -7.39 | -0.69 |



Security selection adversely impacted returns in India and South Africa. Security selection also adversely impacted relative returns within Consumer Staples, Financials, and Healthcare.

An underweight allocation to Healthcare also adversely impacted relative returns, as Healthcare outperformed. This was partly offset by below benchmark allocations to Materials, Consumer Staples, and Financials that underperformed the broader Emerging Market Index.

Source: State Street and FactSet

# Fixed Income Portfolio
## Review and Outlook

Phil Pagliaro
Kevin McGrath

| | ASSET ALLOCATION As of June 30, 2020 | | | PERFORMANCE (for periods ending June 30, 2020)[1] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | FY20 | | Trailing Five Years | | Trailing Seven Years | | Trailing Ten Years | |
| **Asset Class** | **Mkt Value ($ millions)** | **Actual (%)** | **Target (%)** | **NJ** | **Bench** | **NJ** | **Bench** | **NJ** | **Bench** | **NJ** | **Bench** |
| U.S. Government | 3,613 | 4.79% | 5.00% | 10.67% | 10.45% | 3.56% | 3.99% | 2.80% | 3.77% | 4.34% | 3.79% |
| Investment Grade Credit | 6,819 | 9.04% | 10.00% | 10.46% | 9.92% | 5.32% | 5.34% | 5.11% | 4.79% | 5.56% | 4.90% |
| High Yield | 1,031 | 1.37% | 2.00% | -0.92% | 0.00% | 4.73% | 4.78% | | | | |

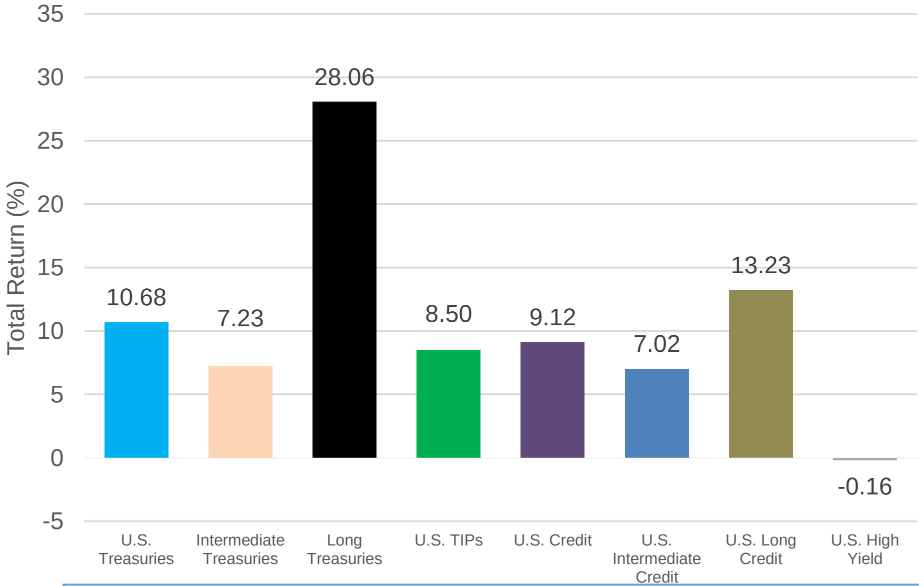
# FY20 Fixed Income Portfolio Review and Outlook

- **During FY20, the Fixed Income Portfolio returned +9.49% versus +8.86% for the benchmark**
  - the key driver of relative returns was the outperformance of the Investment Grade Portfolio, which outperformed its benchmark by 54 basis points
  - the Investment Grade (IG) portfolio, which represents slightly more than half of the total Fixed Income Portfolio, realized strong absolute and relative returns
  - the High Yield (HY) portfolio underperformed its benchmark by 92 basis points
- **Within the Fixed Income portfolio:**
  - the IG portfolio benefitted from favorable yield curve, sector, and security selection
  - within the U.S. Treasuries portfolio, returns were buoyed by a sharp move to lower interest rates, with modest duration tilts and yield curve positioning benefiting relative returns
  - High Yield (HY) performance was adversely impacted by its exposure to the Energy sector
- **Looking ahead to FY21, a cautious approach is warranted in the midst of record low bond yields, increasing debt issuance, and weakening credit fundamentals**
  - central banks are expected to continue to pursue extraordinary monetary policy
  - the Federal Reserve is expected to maintain policy flexibility and will likely maintain highly accommodative policy for an extended period
  - quantitative easing is expected to maintain further support for U.S. Treasuries and investment grade corporate bonds
  - these actions may be fostering a complacency to the risk of a potential rise in inflation

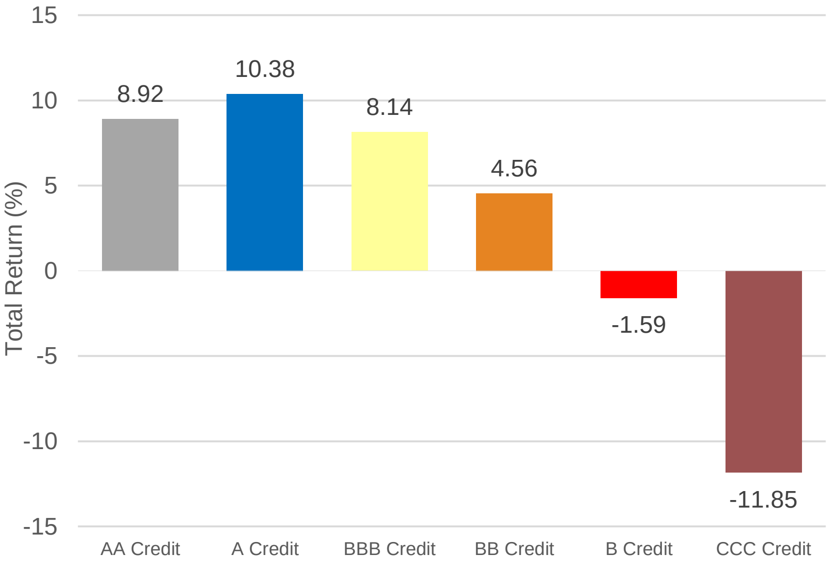
# FY20 Fixed Income Portfolio Review and Outlook

## Sector, Quality and Yield Curve Returns

### FY20 Select Sector and Yield Curve Returns




### FY20 Select Quality Returns




During FY20, the fixed income market realized strong returns, with High Yield the notable exception as lower quality spreads widened. Long Treasuries and Long US Credit outperformed.

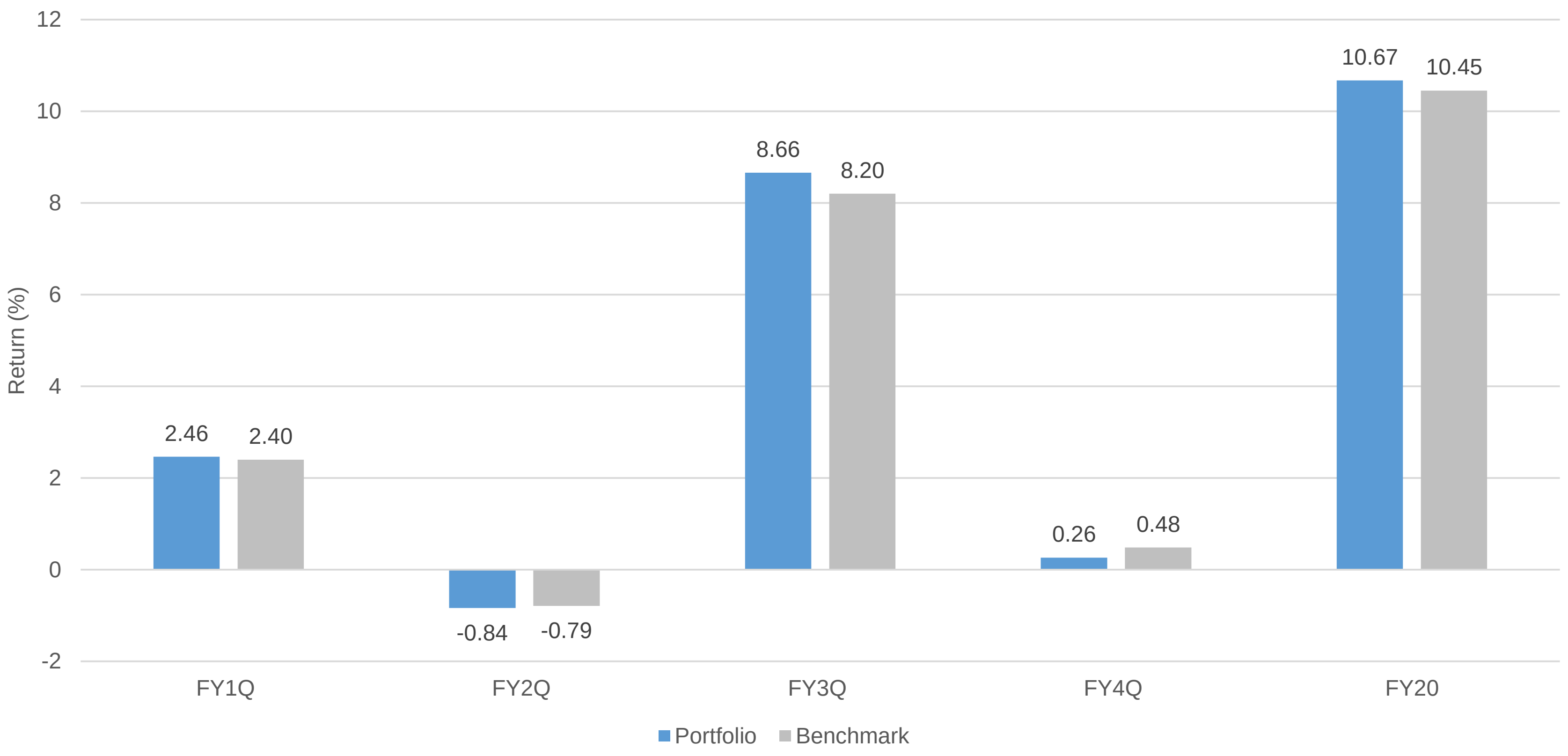
During FY20, higher quality corporate bonds outperformed. Within IG, single A quality outperformed all other quality buckets. CCC rated high yield bonds underperformed.

Long Treasuries and Long US Credit were the top performing sectors in FY20, driven by a sharp decline in yields in a flight to quality in the midst of extraordinary monetary policy

Source: Bloomberg

# FY20 U.S. Treasury Portfolio Review and Outlook

For the fiscal year, the U.S. Treasury Portfolio returned 10.67%, outperforming the benchmark return of 10.45% by 0.22%

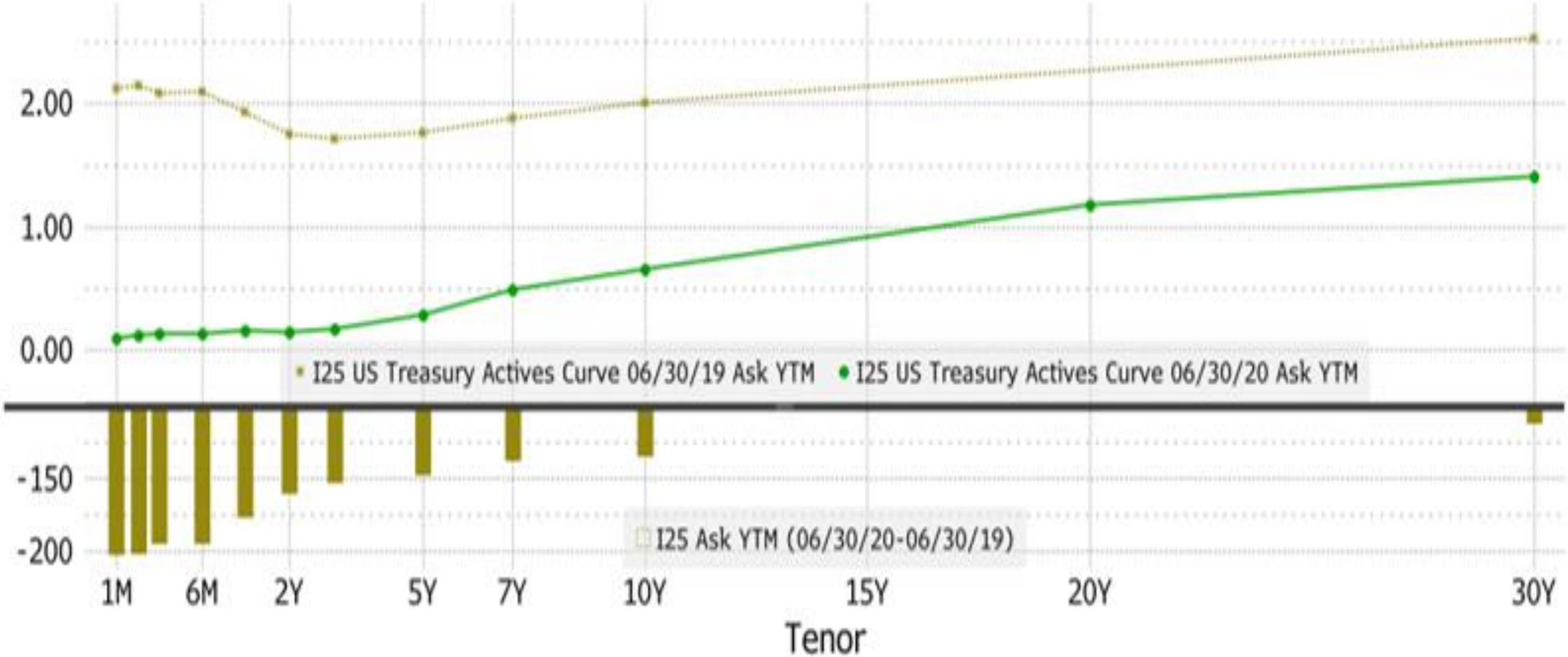



The U.S. Treasury Portfolio realized strong returns during the March quarter, as the extraordinary actions taken by the U.S. Federal Reserve fueled demand for U.S. Treasuries

Source: State Street, Bloomberg PORT

# FY20 Changes to the U.S. Treasury Yield Curve

U.S. Treasury Yield Curve
June 30, 2019 – June 30, 2020



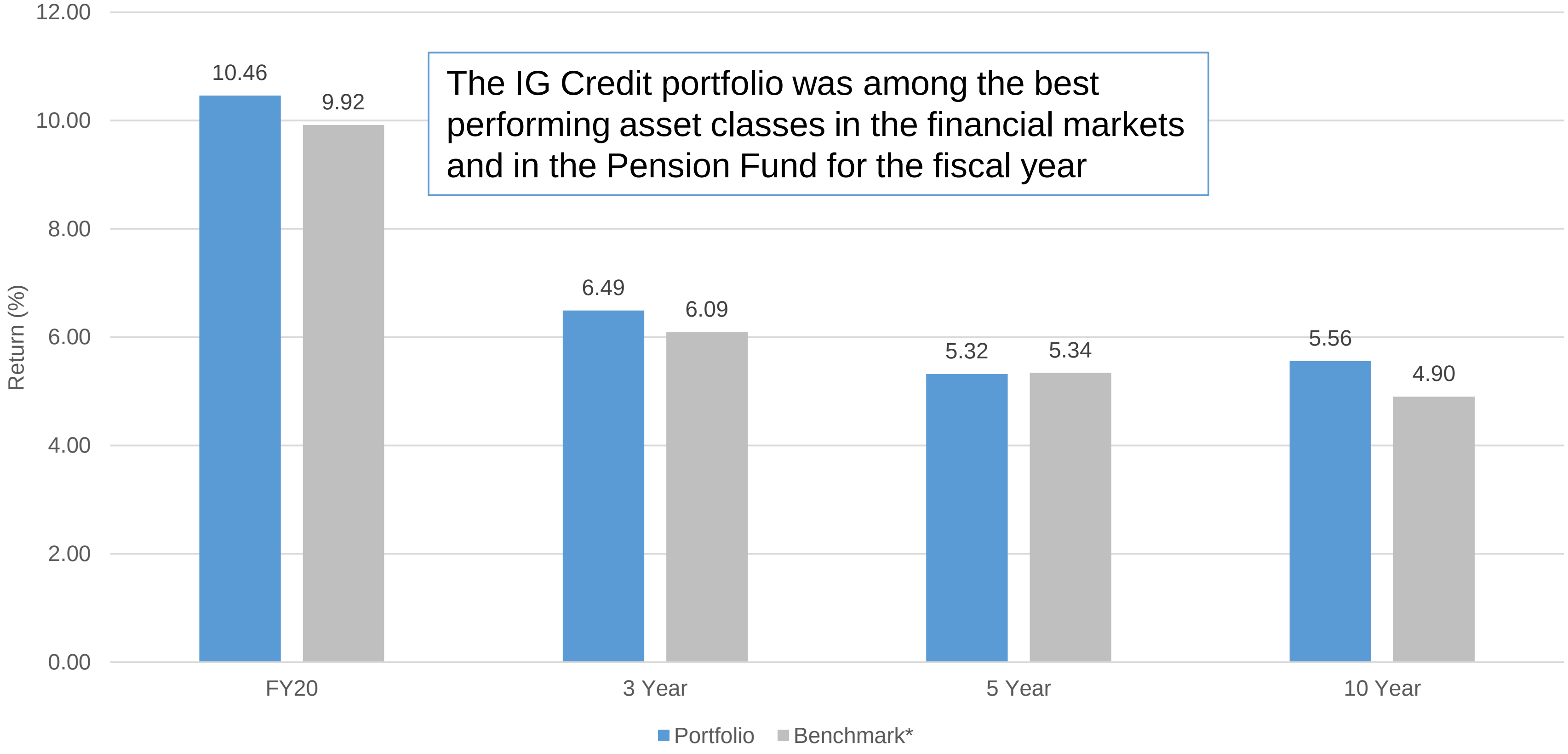

The U.S. Treasury yield curve shifted significantly lower during the second-half of the fiscal year. Modest yield curve tilts in both the U.S. Treasury portfolio and the Investment Grade Credit portfolio benefited from the pronounced shift of the U.S. Treasury yield curve that began in earnest in March 2020.

The Portfolio's fiscal year outperformance of 22 basis points can be attributed to +19 basis points from positive Duration effect and + 3 basis points from yield curve positioning

Source: Bloomberg and State Street

# FY20 Investment Grade Credit Portfolio Review and Outlook

For the fiscal year, the U.S. Investment Grade Portfolio returned 10.46% vs. 9.92% for the Bloomberg Barclays US Credit (A+) benchmark



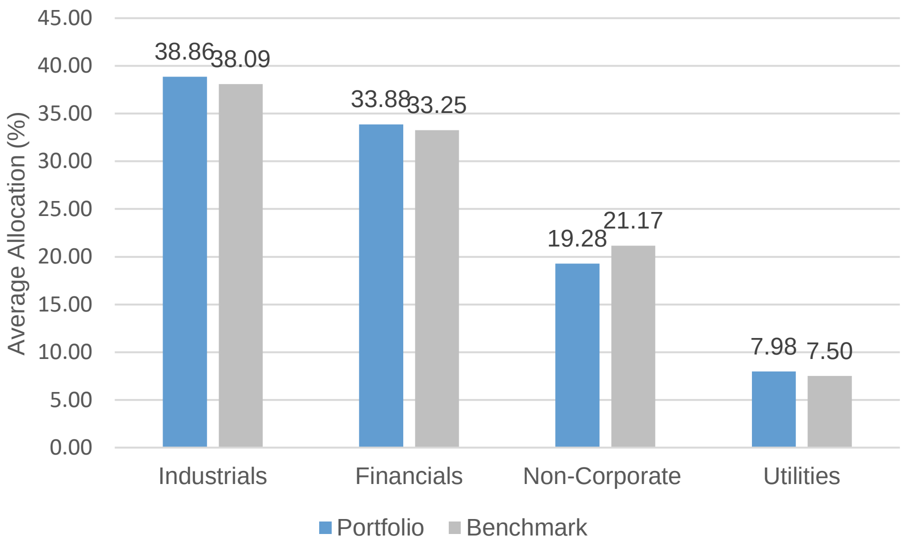

The IG Credit portfolio was among the best performing asset classes in the financial markets and in the Pension Fund for the fiscal year

The 54 basis points of IG Credit outperformance is attributed to positive Yield Curve (+20 bps), Sector (+11 bps), and Security Selection effects (+23 bps)

Source: State Street, Bloomberg PORT. *The graph shows the current custom investment grade credit benchmark. In FY 2010 the benchmark was the Barclays Long Government/Credit Index and in FY 2015 the benchmark was the Barclays Credit Index.

# FY20 Investment Grade (IG) Credit Portfolio Review and Outlook

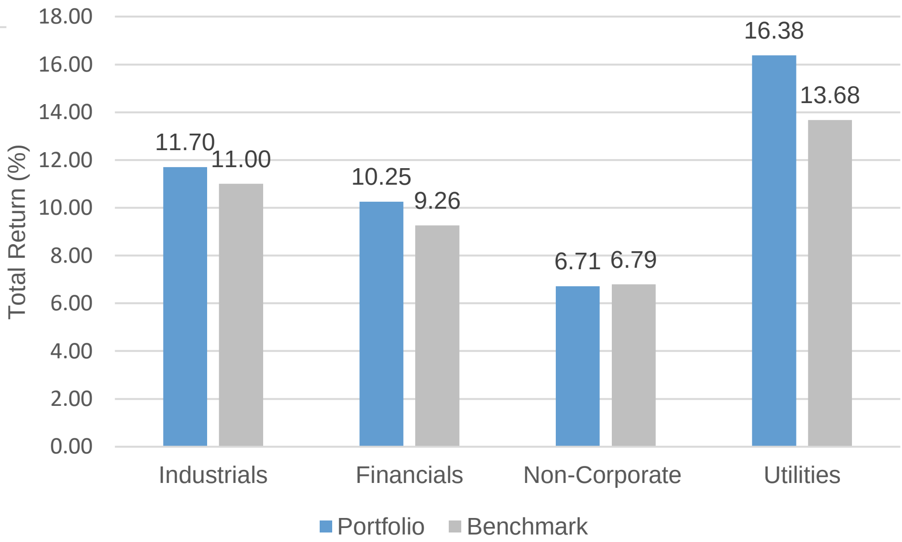
## FY20 IG Credit Portfolio Sector Allocation vs. Benchmark




The IG Credit portfolio was slightly overweight the Industrial, Financial and Utility sectors and underweight the Non-Corporate sector.

The Industrial, Financial and Utility sectors outperformed Non-Corporates during FY20. IG Credit portfolio returns also benefited from favorable security selection.

## FY20 IG Credit Portfolio Sector Returns vs. Benchmark

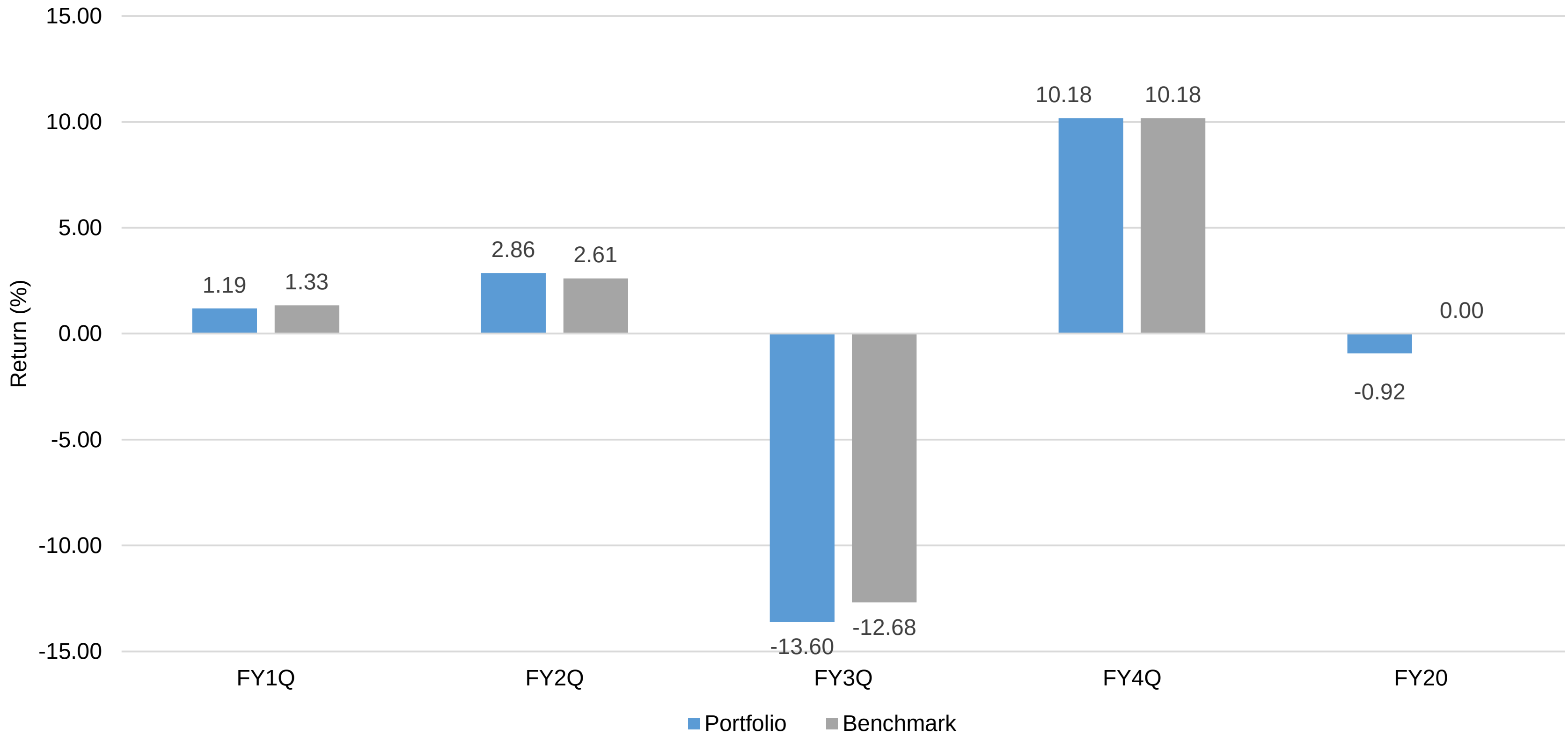



Sector and Security Selection benefited the IG Credit portfolio during the fiscal year

Source: FactSet

# FY20 High Yield Portfolio Review and Outlook

For the fiscal year, the High Yield Portfolio returned -0.92% vs. the 0.00% benchmark return



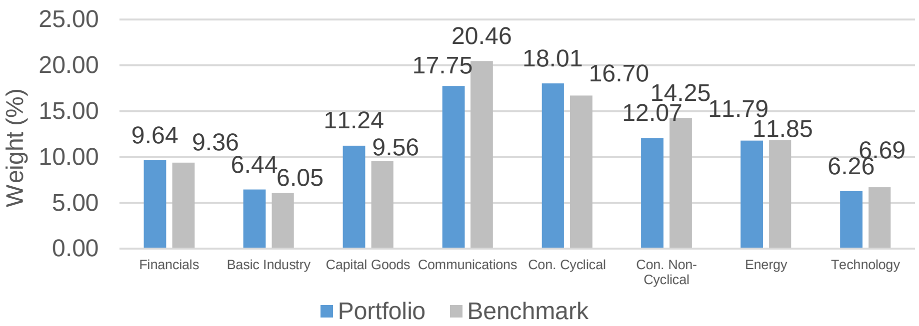

The key driver of relative returns for the High Yield portfolio during FY20 was underperformance in the midst of the market sell-off during the March quarter. During FY20, sector allocation, curve positioning, and security selection adversely impacted returns.

During FY20, relative returns for the High Yield Portfolio were driven by underperformance during the market correction in early 2020

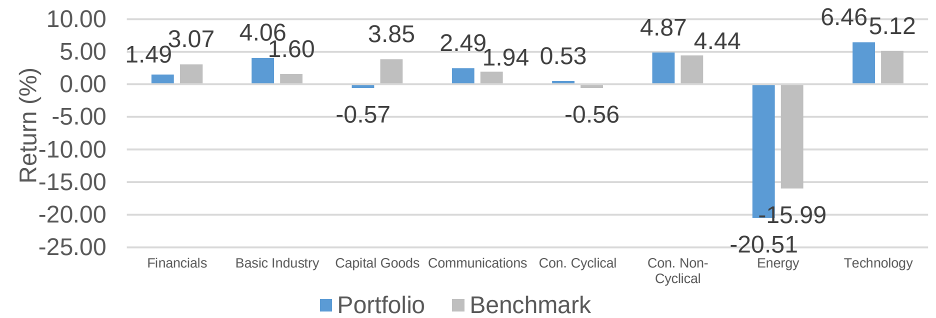
Source: State Street

# FY20 High Yield Portfolio Review and Outlook

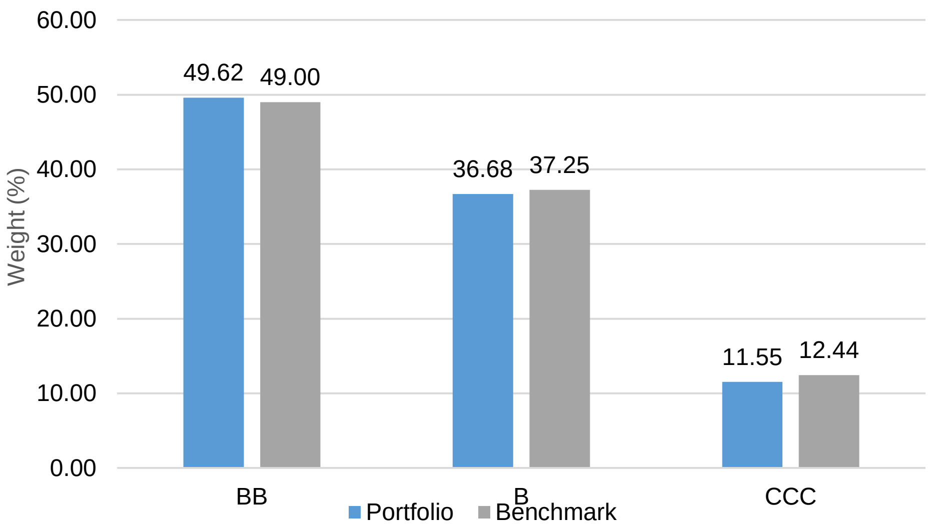
## FY20 High Yield vs. Benchmark Sector Weights



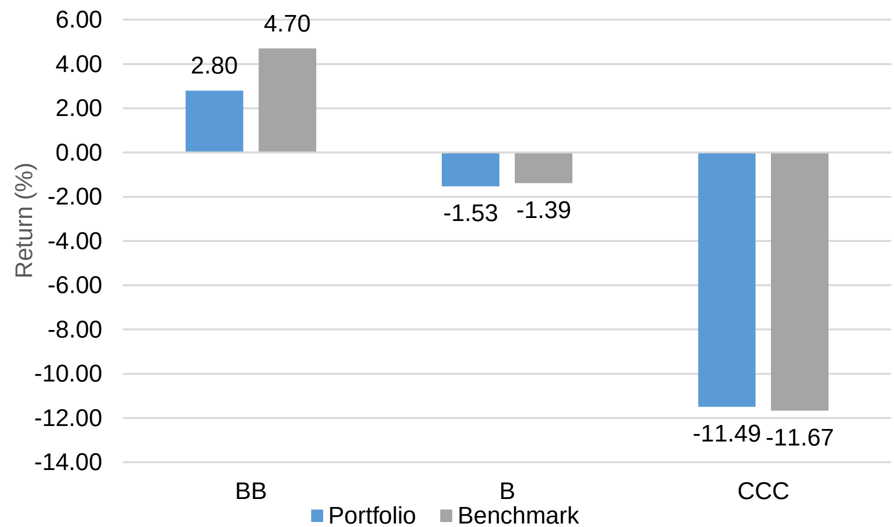

## FY20 High Yield vs. Benchmark Sector Returns




## FY20 High Yield vs. Benchmark Ratings Weights




## FY20 High Yield vs. Benchmark Ratings Returns




Security Selection within BB rated corporates and within energy adversely impacted relative returns. An underweight allocation to consumer non-cyclicals also detracted from returns.

Source: State Street, Bloomberg PORT

# Private Equity and Private Credit Portfolio

## Review and Outlook

### Jared Speicher

| | ASSET ALLOCATION As of June 30, 2020 | | | PERFORMANCE (for periods ending June 30, 2020)[1] FY20 | | Trailing Five Years | | Trailing Seven Years | | Trailing Ten Years | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Asset Class** | **Mkt Value ($ millions)** | **Actual (%)** | **Target (%)** | **NJ** | **Bench** | **NJ** | **Bench** | **NJ** | **Bench** | **NJ** | **Bench** |
| Private Equity | 8,476 | 11.24% | 12.00% | 0.89% | 1.42% | 9.57% | 10.10% | 13.08% | 11.53% | | |
| Private Credit | 5,689 | 7.54% | 6.00% | -3.64% | 2.33% | 6.07% | 5.31% | 7.55% | | 9.76% | |

# FY20 Private Equity Portfolio Review and Outlook

- **During FY20, the Private Equity Portfolio returned +0.89% vs. +1.42% for the Benchmark**
  - key factors impacting relative returns included vintage year concentrations, as well as sector strategy weights, and certain geographic exposures
    - the private equity portfolio is overweight exposure to underperforming vintage years 2008 and 2011
    - within sector strategies, the private equity portfolio's underweight exposure to Venture and Growth Equity impacted returns
    - within geographic exposures, the private equity portfolio's underweight exposure to European funds and overweight exposure to Global funds impacted returns
    - within sectors, the private equity portfolio's underweight exposure to the Healthcare sector and overweight exposure to the Energy sector also impacted returns
  - private equity outperformed the benchmark over the 7-year time horizon
    - there is both a timing and a calculation difference between the portfolio and the benchmark
    - the benchmark is presented with a three-month lag
    - the private equity portfolio return is compounded daily using a time-weighted methodology
- **Looking to FY21 and beyond, uncertainties remain around the shape and timing of the recovery for Private Equity**
  - deal activity has slowed with GPs seeking more time from LPs and lenders to work through challenges
  - capital calls have stabilized while distributions are expected to be delayed
  - the private equity investment model is well-positioned to navigate uncertainty and historically has performed well in periods following market dislocations
    - multi-year investment horizons provide flexibility
    - private equity firms have operating expertise and relationships with lenders that help companies navigate tough economies

# FY20 Private Credit Portfolio Review and Outlook

- **During FY20, the Private Credit Portfolio returned -3.64% versus +2.33% for the Benchmark**
  - private credit funds underperformed the public high yield market following unprecedented support from the Federal Reserve in the midst of pandemic-related market dislocations
    - private credit markets, including the private credit portfolio, provide floating-rate credit exposure, which underperforms in a declining interest rate environment
      - certain strategies also utilize leverage that magnified losses
  - private credit outperformed the benchmark over the 5-year time horizon
  - legacy credit-oriented hedge funds adversely impacted returns
  - the private credit portfolio's inclusion of publicly-traded BDCs also adversely impacted returns
  - there is a timing difference between the portfolio and the benchmark since the benchmark is presented with a one-month lag
    - if adjustments are made for the timing difference, the performance spread would be 469 basis points, an improvement of 128 basis points

- **The outlook for the Private Credit Portfolio appears to be favorable**
  - structural advantages of private credit remain (illiquidity premium, speed/certainty premium, and complexity premium)
  - stronger loan documents, better lender protections, and superior underwriting and origination
  - low global public fixed income yields suggest private credit will offer a more attractive risk-return profile
  - continued opportunities will be provided by evolving banking regulations
  - the Private Credit Portfolio's overweight exposure to opportunistic credit should benefit the Pension Fund over the long-term, as significant dry powder was deployed at depressed prices during the depths of the crisis

# Real Estate and Real Assets Portfolio
## Review and Outlook

Kevin Higgins

| | ASSET ALLOCATION As of June 30, 2020 | | | PERFORMANCE (for periods ending June 30, 2020)[1] FY20 | | Trailing Five Years | | Trailing Seven Years | | Trailing Ten Years | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Asset Class | Mkt Value ($ millions) | Actual (%) | Target (%) | NJ | Bench | NJ | Bench | NJ | Bench | NJ | Bench |
| Real Estate | 4,804 | 6.37% | 7.50% | -3.42% | 3.93% | 7.56% | 7.48% | 9.84% | 8.91% | | |
| Real Assets | 1,689 | 2.24% | 2.50% | -19.41% | -20.07% | -1.67% | -3.20% | -1.42% | -2.64% | | |

# FY20 Real Estate Portfolio Review and Outlook

- **During FY20, the Real Estate Portfolio returned -3.42% versus +3.93% for the Benchmark while remaining cash flow positive**
  - the private real estate portfolio is primarily comprised of closed-end funds with non-core strategies while the benchmark (NCREIF ODCE index) is exclusively comprised of core, open-end funds
    - non-core strategies materially underperformed during FY20
  - private real estate funds have outperformed the benchmark over the 3, 5, and 10-year time horizons
  - public REITs comprise 20% of real estate, and in FY20 detracted 107 bps from total real estate performance
  - there is a timing difference between the portfolio and the benchmark since the benchmark is presented with a one-quarter lag. if adjustments are made for the timing difference, the performance spread would be 475 basis points, an improvement of 260 basis points
  - the real estate portfolio has been cash flow positive each fiscal year since 2013.  During FY20 real estate generated net cash flow of $193 million, and in the wake of COVID-19 generated $32 million of net cash flow.
- **Within the Private Real Estate portfolio, the key driver of FY20 returns was the allocation to Non-Core**
  - Non-Core strategy funds represent 69% of the portfolio, and over a 10-year horizon, non-core strategies contributed 126 bps of outperformance (annualized)
    - several private real estate funds adversely impacted absolute and relative returns during FY20
  - the Non-Core strategy is more diversified by property type. While the ODCE benchmark is primarily comprised of office, industrial, multifamily and retail, the portfolio contains 30% of alternative property types, including medical office, self storage, hotel/leisure, and senior housing
    - four of the top 5 funds that were net value drivers for FY20 were single sector funds focused on medical office, multifamily, and industrial/logistics assets
    - funds with a concentration of hotel/leisure and senior housing detracted from value
  - the Non-Core strategy has a more diversified geographic allocation; funds in the ODCE index may contain no more than 5% non-US assets, while the portfolio is 1/3 invested in Europe and Asia-Pacific
- **Outlook for the Real Estate sector**
  - recent vintage funds have ample dry powder to capitalize on market dislocations
  - the Division will continue its strategy to diversify the Real Estate portfolio with assets that focus on long term demographic and secular trends, and reduce correlation to economic cycles.  Target assets include: data centers, life science/research, medical office, industrial/distribution, and multifamily

# FY20 Real Assets Portfolio Review and Outlook

- **During FY20, the Real Assets Portfolio returned -19.4% versus -20.1% for the Benchmark in the midst of the severe drop in energy demand as the global economy shut down**
  - the Real Assets portfolio is comprised of private real asset funds, as well as publicly traded Master Limited Partnerships (MLPs) that currently represent 8% of the Real Assets portfolio
    - MLPs were incorporated into the portfolio in December 2015
  - during FY20, private real assets funds outperformed the benchmark
    - the diversification into infrastructure was additive to returns
    - the funds that were the main detractors were legacy investments that are either dedicated energy funds or are funds that are otherwise heavily weighted in upstream energy assets
  - private real asset funds have also outperformed the benchmark over the 3 and 5-year time horizons
    - the policy benchmark is a customized benchmark constructed by Cambridge Associates (CA) comprised of upstream and midstream energy, as well as infrastructure and timber to reflect the longer term goals for the real assets sector allocation
  - during FY20, MLPs detracted from total real assets performance
  - in FY20, Real Assets generated net cash flow of $68 million, the second consecutive year the sector has contributed positive net cash flow

- **Outlook for the Real Assets sector**
  - in order to diversify the Real Assets portfolio, recent commitments have been made to funds targeting infrastructure, renewable energy, and agriculture assets
  - the Division will continue its strategy to expand the Real Assets portfolio with funds that target diversified infrastructure, renewable energy, communications, transportation, and agriculture/agribusiness

# Risk Mitigation Strategies Portfolio
## Review and Outlook

## Jessie Choi

| | ASSET ALLOCATION As of June 30, 2020 | | | PERFORMANCE (for periods ending June 30, 2020)[1] FY20 | | Trailing Five Years | | Trailing Seven Years | | Trailing Ten Years | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Asset Class** | **Mkt Value ($ millions)** | **Actual (%)** | **Target (%)** | **NJ** | **Bench** | **NJ** | **Bench** | **NJ** | **Bench** | **NJ** | **Bench** |
| Risk Mitigation Strategies | 2,434 | 3.23% | 3.00% | 1.68% | 4.74% | 2.55% | 4.27% | 2.58% | 3.92% | | |

# FY20 Risk Mitigation Portfolio Review and Outlook

- **During FY20, the Risk Mitigation Strategies (RMS) portfolio returned +1.68% versus +4.74% for the Benchmark (T-Bill +300 basis points)**
- the RMS portfolio mitigated losses during the sharp market sell-off due to concerns over the spread of the Covid-19 pandemic
  - For the first six months of 2020, the RMS portfolio returned 0.05% while global equities (MSCI ACWI) returned -6.25%; over the same period the HFRI FoF: Conservative Index returned -2.03%
- key factors impacting relative returns included underperformance of the Fund of Fund (FoF) strategies (including the FAIR mandates), as well as negative returns for macro-systematic strategies
  - relative returns for the FoF strategies reflect higher beta equity long/short exposures and fund selection
  - macro-systematic strategies experienced losses in the midst of sharp equity market reversals, offsetting gains in long fixed income positions
  - strong returns for market neutral strategies added value
- timing and calculation methodology differences also impacted reported relative returns
  - the benchmark is presented with a one-month lag
  - the impact of cash flows was significant in the RMS Portfolio as there were large redemptions at year-end 2019 and during the first quarter of 2020
  - if adjustments are made for the timing and cash flow differences, the performance spread versus the benchmark would be -247 basis points, an improvement of 59 basis points

**Looking ahead to FY21 and beyond**

- we expect to see continued outperformance from Market Neutral strategies, with higher sustained volatility and dispersion from geopolitical risk, the US election, and Covid-19 waves
- as previously discussed, the Division intends to increase its allocation weight to the market neutral strategy from other non-core strategies in the RMS portfolio in the coming quarters
  - the Division continues to receive proceeds from legacy and non-core fund relationships as part of its redemption and rebalancing program