

# NJ DIVISION OF INVESTMENT

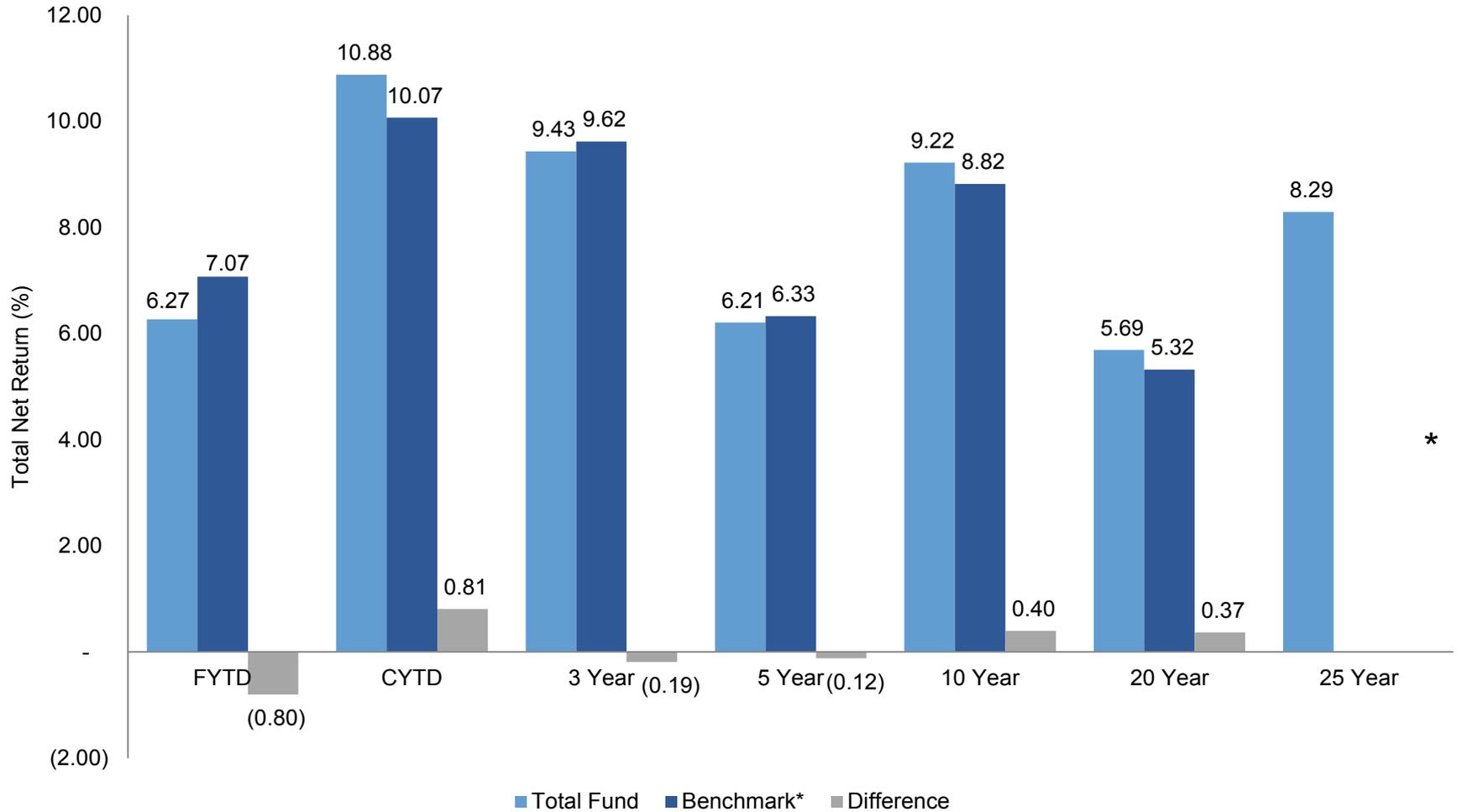
## Director's Report

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State Investment Council  
September 25, 2019

***“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<sup>(1)</sup> for Periods Ending June 30, 2019



(1) Returns are preliminary, unaudited, net of all fees, and exclude Police and Fire Mortgage Program

\*Benchmark return not available for 25-Year period

## Asset Allocation and Net Returns by Asset Class (June 30, 2019)

Asset Class	ASSET ALLOCATION				PERFORMANCE (for periods ending June 30, 2019) <sup>(1)</sup>							
	As of June 30, 2019				FYTD		Calendar YTD		Trailing Three Years		Trailing Five Years	
	Mkt Value	Actual (%)	Target (%)	Difference	NJ	Bench	NJ	Bench	NJ	Bench	NJ	Bench
<b>RISK MITIGATION</b>												
<b>RISK MITIGATION STRATEGIES</b>	<b>3,348</b>	<b>4.25%</b>	<b>5.00%</b>	<b>-0.75%</b>	<b>5.04%</b>	<b>5.39%</b>	<b>5.33%</b>	<b>2.75%</b>	<b>4.13%</b>	<b>4.45%</b>	<b>2.97%</b>	<b>3.94%</b>
<b>LIQUIDITY</b>												
Cash Eqv & Short Term	4,439	5.64%	5.50%	0.14%	3.11%	2.31%	1.67%	1.24%	2.00%	1.38%	1.56%	0.87%
U.S. Government	1,517	1.93%	3.00%	-1.07%	6.72%	7.24%	4.86%	5.18%	1.01%	1.46%	1.26%	2.04%
<b>TOTAL LIQUIDITY</b>	<b>5,956</b>	<b>7.57%</b>	<b>8.50%</b>	<b>-0.93%</b>	<b>4.35%</b>	<b>4.04%</b>	<b>2.70%</b>	<b>2.62%</b>	<b>1.20%</b>	<b>1.42%</b>	<b>1.20%</b>	<b>1.32%</b>
<b>INCOME</b>												
Investment Grade Credit	7,911	10.05%	10.00%	0.05%	10.07%	9.42%	8.15%	8.02%	3.25%	3.14%	3.70%	3.56%
Public High Yield	1,110	1.41%	2.50%	-1.09%	6.75%	7.48%	9.61%	9.94%	7.19%	7.52%	4.69%	4.70%
Global Diversified Credit	4,790	6.09%	5.00%	1.09%	5.79%	7.48%	4.90%	9.94%	10.48%	7.52%	7.86%	4.70%
Credit-Oriented HF's	810	1.03%	1.00%	0.03%	-1.56%	3.01%	-1.21%	2.95%	5.03%	7.08%	2.93%	2.93%
Debt-Related PE	925	1.17%	2.00%	-0.83%	2.61%	9.12%	2.14%	3.92%	9.06%	11.85%	7.89%	7.86%
Debt Related Real Estate	418	0.53%	1.00%	-0.47%	6.83%	11.63%	5.85%	5.35%	6.41%	8.95%	5.67%	7.98%
<b>TOTAL INCOME</b>	<b>15,963</b>	<b>20.28%</b>	<b>21.50%</b>	<b>-1.22%</b>	<b>7.35%</b>	<b>8.41%</b>	<b>6.35%</b>	<b>7.84%</b>	<b>6.22%</b>	<b>6.03%</b>	<b>5.03%</b>	<b>4.29%</b>
<b>REAL RETURN</b>												
Real Assets & Commodities	2,214	2.81%	2.50%	0.31%	0.48%	0.43%	0.15%	-5.34%	6.57%	9.55%	0.92%	-0.53%
Equity Related Real Estate	4,520	5.74%	6.25%	-0.51%	8.69%	6.55%	8.66%	2.74%	10.01%	7.01%	11.36%	9.18%
<b>TOTAL REAL RETURN</b>	<b>6,734</b>	<b>8.56%</b>	<b>8.75%</b>	<b>-0.19%</b>	<b>5.84%</b>	<b>4.85%</b>	<b>5.70%</b>	<b>0.44%</b>	<b>8.87%</b>	<b>7.63%</b>	<b>7.57%</b>	<b>5.20%</b>
<b>GLOBAL GROWTH</b>												
US Equity	23,774	30.20%	30.00%	0.20%	7.85%	9.32%	19.41%	18.37%	13.37%	13.91%	9.04%	10.45%
Non-US Dev Market Eq	9,165	11.64%	11.50%	0.14%	1.16%	1.40%	14.98%	14.65%	9.21%	9.03%	2.52%	2.15%
Emerging Market Eq	5,148	6.54%	6.50%	0.04%	2.38%	1.30%	10.98%	10.69%	9.80%	10.72%	1.77%	2.71%
Buyouts/Venture Cap	7,844	9.97%	8.25%	1.72%	10.03%	12.29%	6.44%	4.12%	13.61%	15.74%	13.18%	12.13%
Equity-Oriented HF's	108	0.14%	0.00%	0.14%	-2.63%	-3.73%	4.00%	0.68%	5.35%	4.66%	1.77%	3.24%
<b>TOTAL GLOBAL GROWTH</b>	<b>46,039</b>	<b>58.49%</b>	<b>56.25%</b>	<b>2.24%</b>	<b>6.27%</b>	<b>7.28%</b>	<b>15.08%</b>	<b>14.32%</b>	<b>12.09%</b>	<b>12.91%</b>	<b>7.32%</b>	<b>8.06%</b>
<b>OTHER</b>												
<b>OPPORTUNISTIC PE</b>	423	0.54%			-3.90%	12.29%	-4.66%	4.12%	7.37%	15.74%	6.44%	12.13%
<b>OTHER</b>	248	0.31%										
<b>TOTAL FUND<sup>(2)</sup></b>	<b>78,711</b>	<b>100.00%</b>			<b>6.27%</b>	<b>7.07%</b>	<b>10.88%</b>	<b>10.07%</b>	<b>9.43%</b>	<b>9.62%</b>	<b>6.21%</b>	<b>6.33%</b>

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

(2) Total Fund excludes Police and Fire Mortgage Program  
Sum of components may not equal totals due to rounding

## Capital Markets Update (for periods ending August 31, 2019)

### Capital Markets Update for periods ending August 31, 2019

	Fiscal YTD	Calendar YTD	One Year	Three Years (Annualized)	Five Years (Annualized)
<u>Global Equity Indices</u>					
MSCI All Country World Index	-2.09	13.80	-0.28	9.17	5.51
<u>US Equity Indices</u>					
Russell 3000	-0.58	18.02	1.30	12.23	9.58
Russell 1000	-0.31	18.48	2.49	12.56	9.84
Russell 2000	-4.39	11.83	-12.92	7.86	6.39
Russell Growth	1.15	22.80	3.09	16.55	12.67
Russell Value	-2.36	13.31	-0.57	7.88	6.45
<u>Non-US Equity Indices</u>					
MSCI EAFE	-3.83	9.66	-3.26	5.91	1.89
MSCI Emerging Markets	-6.04	3.90	-4.36	5.76	0.38
<u>Fixed Income Indices</u>					
Bloomberg Barclays U.S. Aggregate	2.82	9.10	10.17	3.09	3.35
Bloomberg Barclays U.S. Treasury	3.28	8.63	10.38	2.49	2.97
Bloomberg Barclays U.S. Credit	3.66	13.35	12.99	4.47	4.38
Bloomberg Barclays U.S. High Yield	0.97	11.00	6.56	6.17	4.85
<u>Commodities</u>					
Bloomberg Commodities Index	-3.33	0.38	-8.04	-2.38	-9.46
<u>Real Estate</u>					
Bloomberg U.S. REIT Index	5.12	25.05	14.60	7.62	9.33

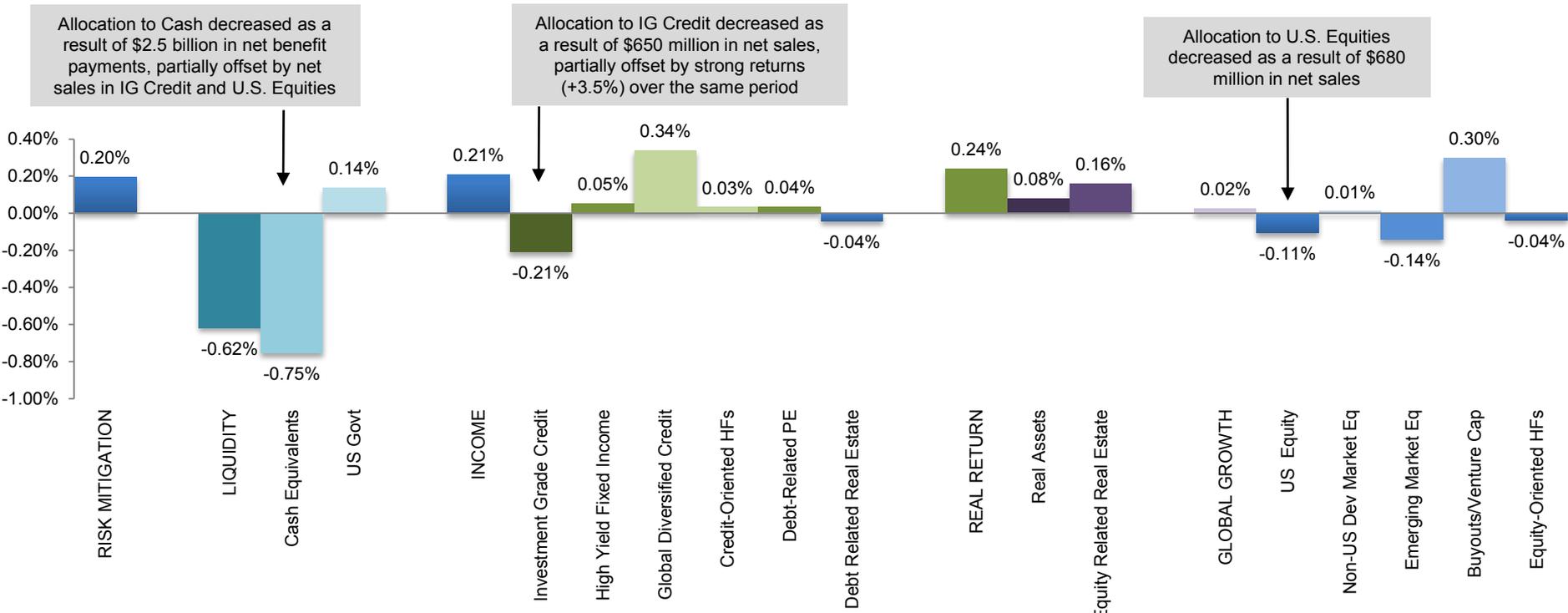
## Asset Allocation and Net Returns by Asset Class (August 31, 2019)

Asset Class	ASSET ALLOCATION				PERFORMANCE (for periods ending August 31, 2019) <sup>(1)</sup>							
	As of August 31, 2019				FYTD		Calendar YTD		Trailing Three Years		Trailing Five Years	
	Mkt Value	Actual (%)	Target (%)	Difference	NJ	Bench	NJ	Bench	NJ	Bench	NJ	Bench
<b>RISK MITIGATION</b>												
<b>RISK MITIGATION STRATEGIES</b>	<b>3,367</b>	<b>4.45%</b>	<b>5.00%</b>	<b>-0.55%</b>	<b>0.80%</b>	<b>0.92%</b>	<b>6.18%</b>	<b>3.69%</b>	<b>4.26%</b>	<b>4.58%</b>	<b>3.15%</b>	<b>4.02%</b>
<b>LIQUIDITY</b>												
Cash Eqv & Short Term	3,696	4.89%	5.50%	-0.61%	0.46%	0.39%	2.13%	1.63%	2.11%	1.50%	1.63%	0.95%
U.S. Government	1,562	2.06%	3.00%	-0.94%	3.33%	3.28%	8.36%	8.63%	2.10%	2.49%	1.96%	2.54%
<b>TOTAL LIQUIDITY</b>	<b>5,258</b>	<b>6.95%</b>	<b>8.50%</b>	<b>-1.55%</b>	<b>1.40%</b>	<b>1.40%</b>	<b>4.14%</b>	<b>4.06%</b>	<b>1.63%</b>	<b>1.86%</b>	<b>1.51%</b>	<b>1.54%</b>
<b>INCOME</b>												
Investment Grade Credit	7,446	9.84%	10.00%	-0.16%	3.46%	3.55%	11.90%	11.86%	4.16%	3.83%	4.14%	4.00%
Public High Yield	1,106	1.46%	2.50%	-1.04%	0.82%	0.97%	10.51%	11.00%	5.94%	6.17%	4.79%	4.85%
Global Diversified Credit	4,860	6.42%	5.00%	1.42%	0.64%	0.97%	5.57%	11.00%	9.83%	6.17%	8.05%	4.85%
Credit-Oriented HF's	802	1.06%	1.00%	0.06%	-0.64%	1.34%	-1.84%	4.32%	4.39%	6.64%	2.77%	3.03%
Debt-Related PE	917	1.21%	2.00%	-0.79%	-0.11%	0.75%	2.02%	4.70%	9.16%	10.29%	7.89%	7.58%
Debt Related Real Estate	369	0.49%	1.00%	-0.51%	-1.07%	3.82%	4.71%	9.37%	6.30%	10.04%	5.30%	7.71%
<b>TOTAL INCOME</b>	<b>15,501</b>	<b>20.49%</b>	<b>21.50%</b>	<b>-1.01%</b>	<b>1.89%</b>	<b>2.25%</b>	<b>8.37%</b>	<b>10.27%</b>	<b>6.36%</b>	<b>5.84%</b>	<b>5.27%</b>	<b>4.51%</b>
<b>REAL RETURN</b>												
Real Assets & Commodities	2,189	2.89%	2.50%	0.39%	-0.77%	0.00%	-0.62%	-5.34%	6.82%	9.55%	1.25%	-0.53%
Equity Related Real Estate	4,464	5.90%	6.25%	-0.35%	0.48%	0.00%	9.18%	2.74%	10.00%	7.01%	11.37%	9.18%
<b>TOTAL REAL RETURN</b>	<b>6,653</b>	<b>8.79%</b>	<b>8.75%</b>	<b>0.04%</b>	<b>0.07%</b>	<b>0.00%</b>	<b>5.77%</b>	<b>0.44%</b>	<b>8.95%</b>	<b>7.78%</b>	<b>7.74%</b>	<b>5.38%</b>
<b>GLOBAL GROWTH</b>												
US Equity	22,769	30.10%	30.00%	0.10%	-1.17%	-0.44%	18.01%	17.85%	11.31%	12.27%	8.26%	9.86%
Non-US Dev Market Eq	8,816	11.65%	11.50%	0.15%	-3.50%	-3.53%	10.96%	10.61%	6.24%	5.96%	2.11%	1.73%
Emerging Market Eq	4,841	6.40%	6.50%	-0.10%	-5.97%	-5.97%	4.36%	4.07%	5.13%	5.80%	-0.26%	0.57%
Buyouts/Venture Cap	7,766	10.27%	8.25%	2.02%	-0.19%	0.00%	6.24%	4.12%	13.40%	15.74%	13.15%	12.13%
Equity-Oriented HF's	75,716	0.10%	0.00%	0.10%	1.41%	3.76%	5.47%	4.47%	4.82%	5.15%	2.29%	3.88%
<b>TOTAL GLOBAL GROWTH</b>	<b>44,269</b>	<b>58.52%</b>	<b>56.25%</b>	<b>2.27%</b>	<b>-1.99%</b>	<b>-1.53%</b>	<b>12.80%</b>	<b>12.57%</b>	<b>9.91%</b>	<b>10.87%</b>	<b>6.64%</b>	<b>7.45%</b>
<b>OTHER</b>												
<b>OPPORTUNISTIC PE</b>	424	0.56%			-0.01%	0.00%	-4.66%	4.12%	7.39%	15.74%	6.44%	12.13%
<b>OTHER</b>	182	0.24%										
<b>TOTAL FUND<sup>(2)</sup></b>	<b>75,653</b>	<b>100.00%</b>			<b>-0.69%</b>	<b>-0.20%</b>	<b>10.11%</b>	<b>9.85%</b>	<b>8.26%</b>	<b>8.50%</b>	<b>5.88%</b>	<b>6.07%</b>

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

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Sum of components may not equal totals due to rounding

# Pension Fund Update: Change in Sector Allocation from June 30, 2019 – August 31, 2019



Allocation to Cash decreased as a result of \$2.5 billion in net benefit payments, partially offset by net sales in IG Credit and U.S. Equities

Allocation to IG Credit decreased as a result of \$650 million in net sales, partially offset by strong returns (+3.5%) over the same period

Allocation to U.S. Equities decreased as a result of \$680 million in net sales

### Risk Mitigation

Allocation to Risk Mitigation strategies is expected to move lower (4.5% vs 5.0%)

### Liquidity

Allocation to Liquidity remains below target following benefit payments (7.0% vs 8.5%)

### Income

Allocation to Income increased modestly, but remains below target. (20.5% vs 21.5%)

### Real Return

Allocation to Real Return is in line with target. (8.8% vs 8.75%)

### Global Growth

Allocation to Global Growth remains above target. (58.5% vs 56.25%)

Net sales in U.S. Equities and IG Credit, along with \$2.5 billion in net benefit payments, were the primary factors impacting changes in sector allocation

## Notification: Modification to Funds Managed by Oz Management

**Background:** The Division has significant investments in funds managed by Oz Management. The relationship commenced in June 2006, with an initial investment of \$50 million in OZ Domestic Partners II, L.P., and has grown over time. As of June 30, 2019, the Division had approximately \$2 billion of net asset value (NAV) invested across eight funds managed by Oz Management, including five separate accounts comprising the OZNJ Platform, two commingled real estate funds, and a small residual position in OZ Domestic Partners II, L.P.

**Modification:** On August 12, 2019, Oz Management announced they will be changing the name of the firm to Sculptor Capital Management LP, effective September 12, 2019. The name change is part of the ongoing transition to a new leadership team.

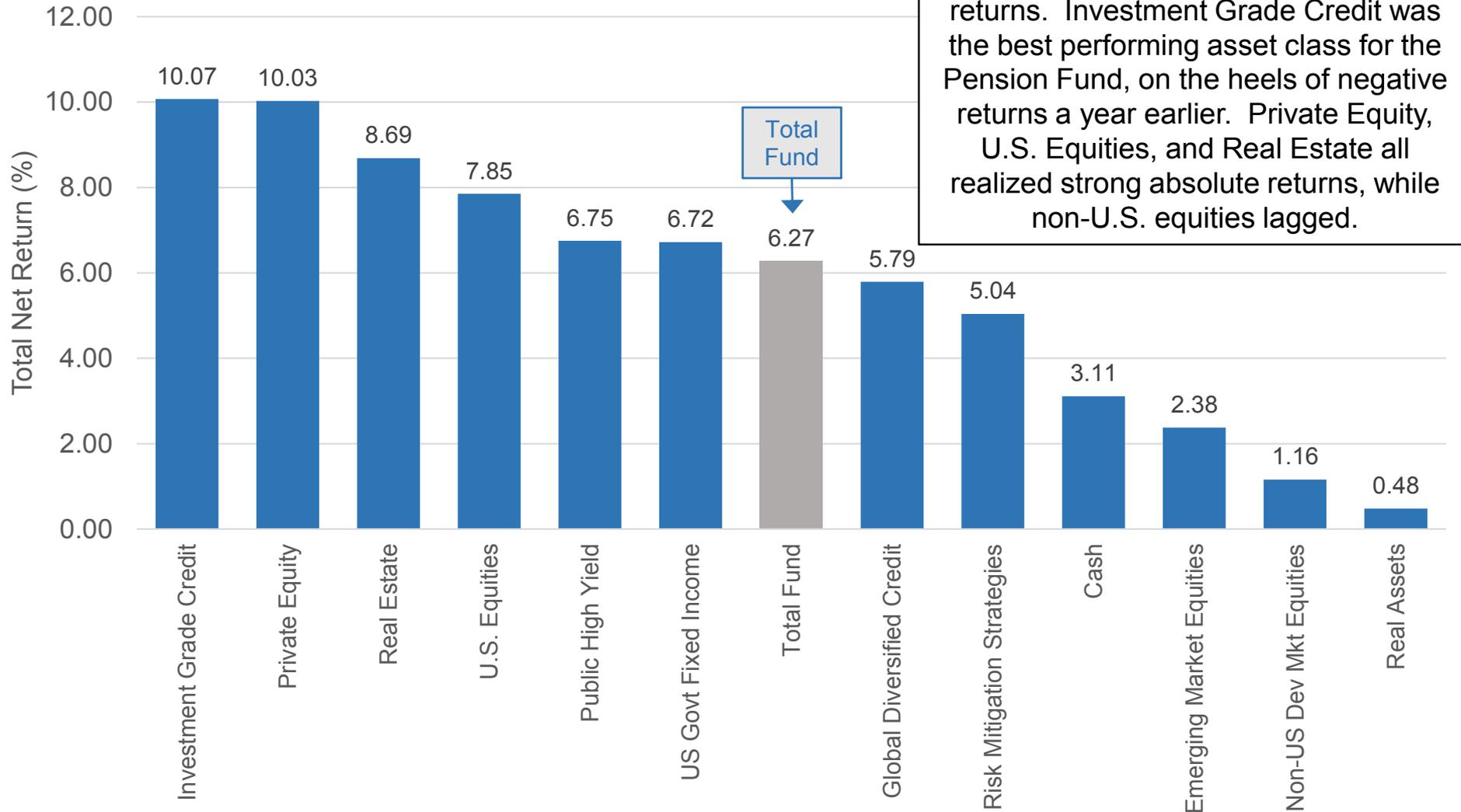
**Impact on Pension Fund:** This change will have no impact from an investment perspective. From an operational perspective, all of the funds managed by Oz Management will change their respective names, including the funds in which the Division is invested. The new names of the funds that will appear on the monthly reporting will be:

Old Name	New Name
Och-Ziff Real Estate Credit Parallel Fund B, L.P.	Sculptor Real Estate Credit Parallel Fund B, LP
OZNJ Real Estate Opportunities, L.P.	Sculptor NJ Real Estate Opportunities, LP
Och-Ziff Real Estate Parallel Fund III E, L.P.	Sculptor Real Estate Parallel Fund III E, LP
OZ Domestic Partners II, L.P.	Sculptor Domestic Partners II, LP
OZNJ Real Asset Opportunities, L.P.	Sculptor NJ Real Asset Opportunities, LP
OZSC, L.P.	Sculptor SC, LP
OZSC II, L.P.	Sculptor SC II, LP
OZNJ Private Opportunities L.P.	Sculptor NJ Private Opportunities, LP

**The Director is notifying the SIC of this modification in accordance with the Alternative Investment Modification Procedures**

# Fiscal Year 2019 Review and Outlook

## Pension Fund Net Returns<sup>(1)</sup> By Asset Class and Strategy: Fiscal Year 2019

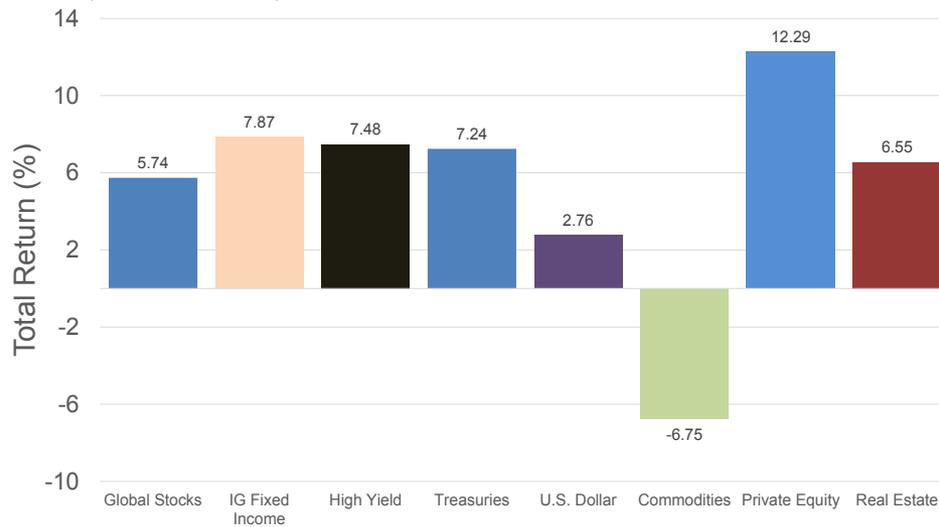


(1) Returns are net of all fees and unaudited. Pension Fund return excludes Police and Fire Mortgage Program.

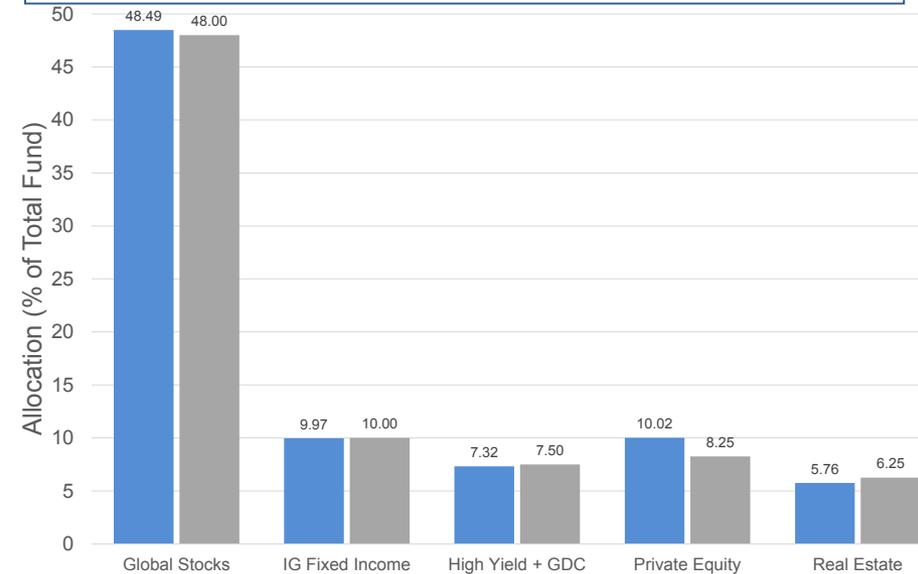
## Fiscal Year 2019 Capital Markets Review: Multi-Asset Class Returns

### FY19 Select Capital Market Returns (1)

(Returns in US\$)



### FY19 Pension Fund Asset Allocation



During FY19, Fixed Income outperformed global public equities. Private markets broadly outperformed, with strong returns in Private Equity and Real Estate. For the fourth time in the past five fiscal years, Commodities realized negative returns (-6.75%).

Throughout FY19, the Pension Fund generally maintained an asset allocation in line with the targeted allocation. A modest overweight allocation to Private Equity benefited overall returns.

Bond yields declined in FY19, following two consecutive years of negative returns for U.S. Treasuries. In this environment, fixed income outperformed global equities. Private equity realized double-digit returns for the third consecutive fiscal year.

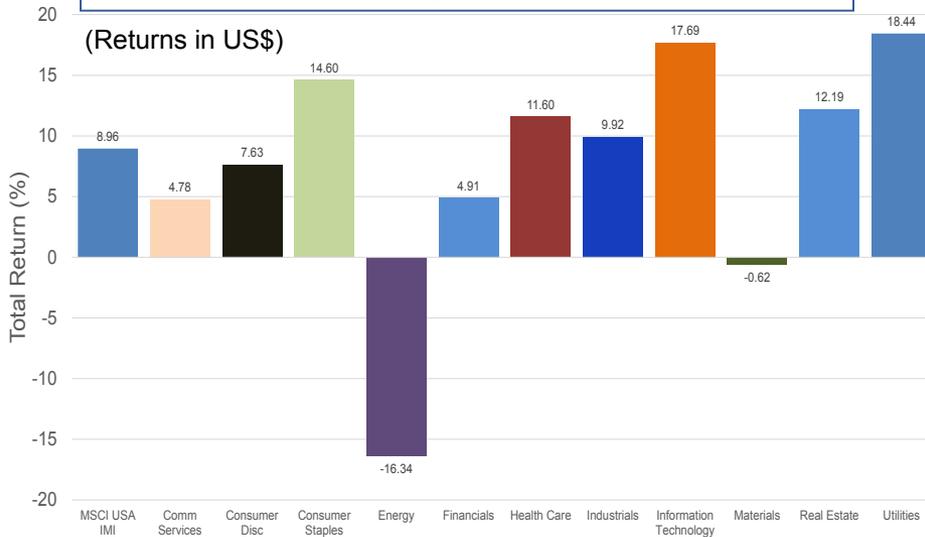
Private Equity (PE) and Real Estate (RE) returns reflect one year ended 3/31/19

Source: Bloomberg, Cambridge Associates, National Council of Real Estate Investment Fiduciaries, and State Street

## Fiscal Year 2019 Capital Markets Review: US Equity Sector Returns

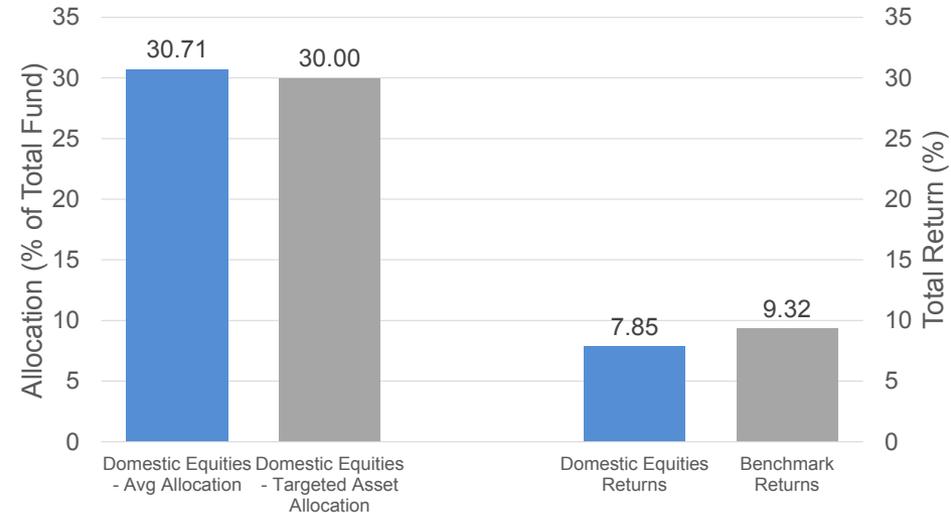
### FY19 Select Capital Market Returns

(Returns in US\$)



During FY 19, U.S. Equities (+8.96%) outperformed the broader equity market, led by Utilities (+18.44), Information Technology (+17.69%), and Consumer Staples (+14.60). Energy (-16.34%) underperformed as commodities declined.

### FY19 Pension Fund Asset Allocation and Returns

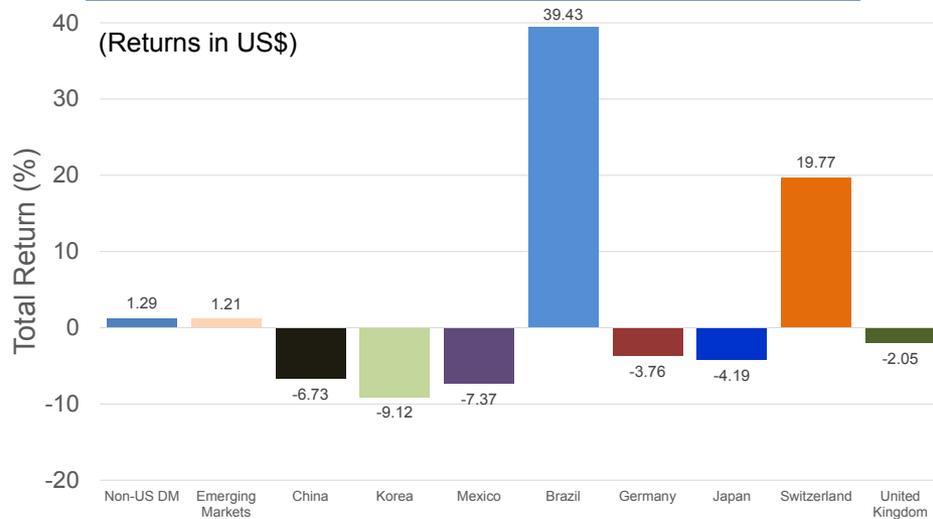


Throughout the period, the Pension Fund maintained an allocation to U.S. Equities broadly in line with the targeted allocation. Notwithstanding favorable absolute returns, relative performance was adversely impacted by a more value-oriented investment approach as growth stocks outperformed.

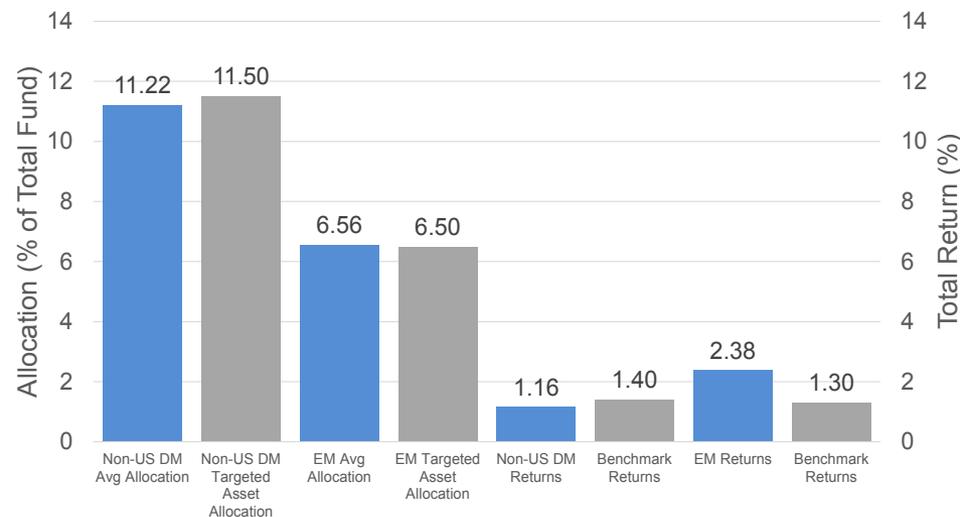
U.S. equities realized positive returns during FY19. Performance was bolstered by accommodative monetary policy, lower U.S. corporate tax rates, and capital inflows due to increased economic uncertainty abroad.

## Fiscal Year 2019 Capital Markets Review: International Equity Returns

### FY19 Select Capital Market Returns



### FY19 Pension Fund Asset Allocation and Returns



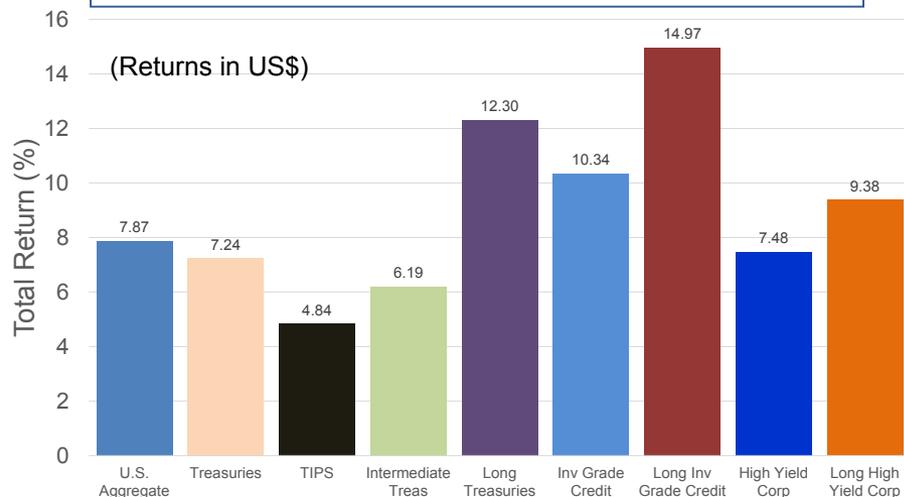
During FY19, Non-US Developed Markets (DM) and Emerging Markets (EM) realized modestly positive returns, with a wide dispersion of returns across geographic regions. The past year was characterized by heightened volatility, as weakness during the first half was offset by strong returns during the last six months of the fiscal year.

On balance, the Pension Fund maintained a modest underweight allocation to DM during FY19. Within DM, the portfolio's allocation to small cap equities adversely impacted returns. Despite low returns, favorable relative performance within EM added value.

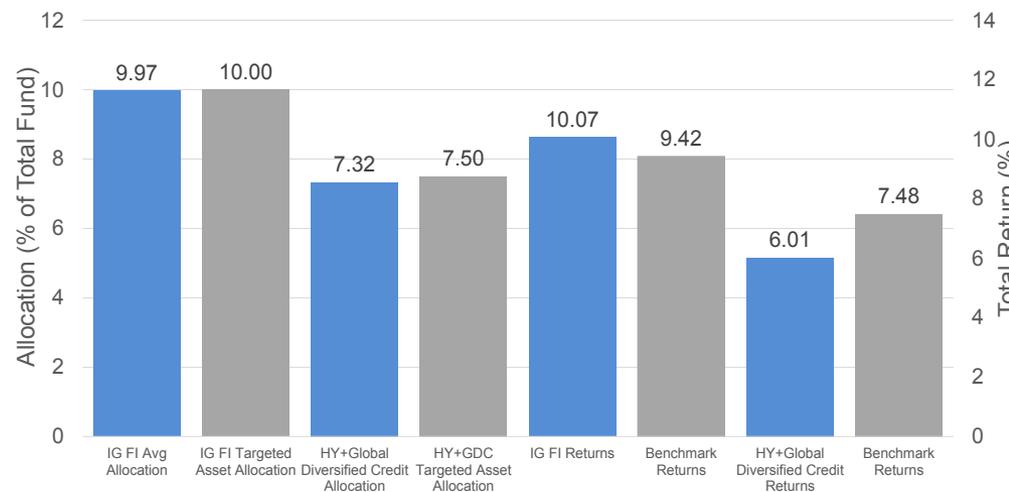
For the eighth time in the past nine fiscal years, DM and EM both underperformed U.S. equities

## Fiscal Year 2019 Capital Markets Review: Fixed Income Returns

### FY19 Select Capital Market Returns



### FY19 Pension Fund Asset Allocation and Returns



During FY19, the Fixed Income market realized favorable returns as yields declined sharply and credit spreads narrowed modestly. In this environment, longer duration fixed income securities outperformed as the yield curve flattened.

Strong relative returns within the Investment Grade (IG) Credit portfolio added value during FY19. Within the Fixed Income portfolio, Global Diversified Credit (GDC) underperformed the public fixed income market.

During FY19, the Bloomberg Barclays U.S. Aggregate Bond Index had its strongest performance year since FY10 as yields declined and credit spreads narrowed.

# US Equity Portfolio Review and Outlook

## FY19 U.S. Equity Portfolio Review and FY20 Key Investment Themes

- **During FY19, the US Equity Portfolio returned +7.85%, supported by favorable earnings growth**
  - absolute returns were driven by positive economic and earnings growth, along with expectations for more accommodative monetary policy during the second half of FY19
  - positive returns for the full fiscal year masked volatility as the broad market fully recovered from a steep October through December decline precipitated by trade wars and concerns of higher interest rates
  - the U.S. Equity portfolio's emphasis on value-oriented and small cap equities impacted relative returns as growth-oriented and large cap equities outperformed
- **Within the U.S. Equities portfolio:**
  - sector and security selection adversely impacted relative returns
  - small cap equities underperformed the benchmark
  - performance was somewhat bolstered by positive selection for large cap equities
  - in conjunction with underperformance of value, an overweight allocation to small cap equities within value-oriented equities also detracted from returns
- **Looking ahead into FY20, the portfolio is positioned in line with the broader market**
  - potential headwinds include concerns related to a possible economic slowdown as well as continued trade tensions that may lead to heightened volatility in equity markets
  - earnings growth is expected to moderate as demand softens
  - the U.S. Equity portfolio remains well-diversified across all eleven industry sectors; in-line with the MSCI USA Investable Market Index

## U.S. Equity Portfolio Returns By Fiscal Year

(Total Return in %)

Fiscal Year	New Jersey Division of Investment Domestic Equity Portfolio	S&P 1500 Benchmark	Relative Outperformance (in basis points)
2010	16.43	15.57	86
2011	33.40	31.65	175
2012	3.54	4.63	-109
2013	21.89	21.13	76
2014	26.23	24.7	153
2015	7.48	7.31	17
2016	-1.58	3.64	-522
2017	19.80	18.09	171
2018	12.78	14.50	-172
2019	7.85	9.32	-147

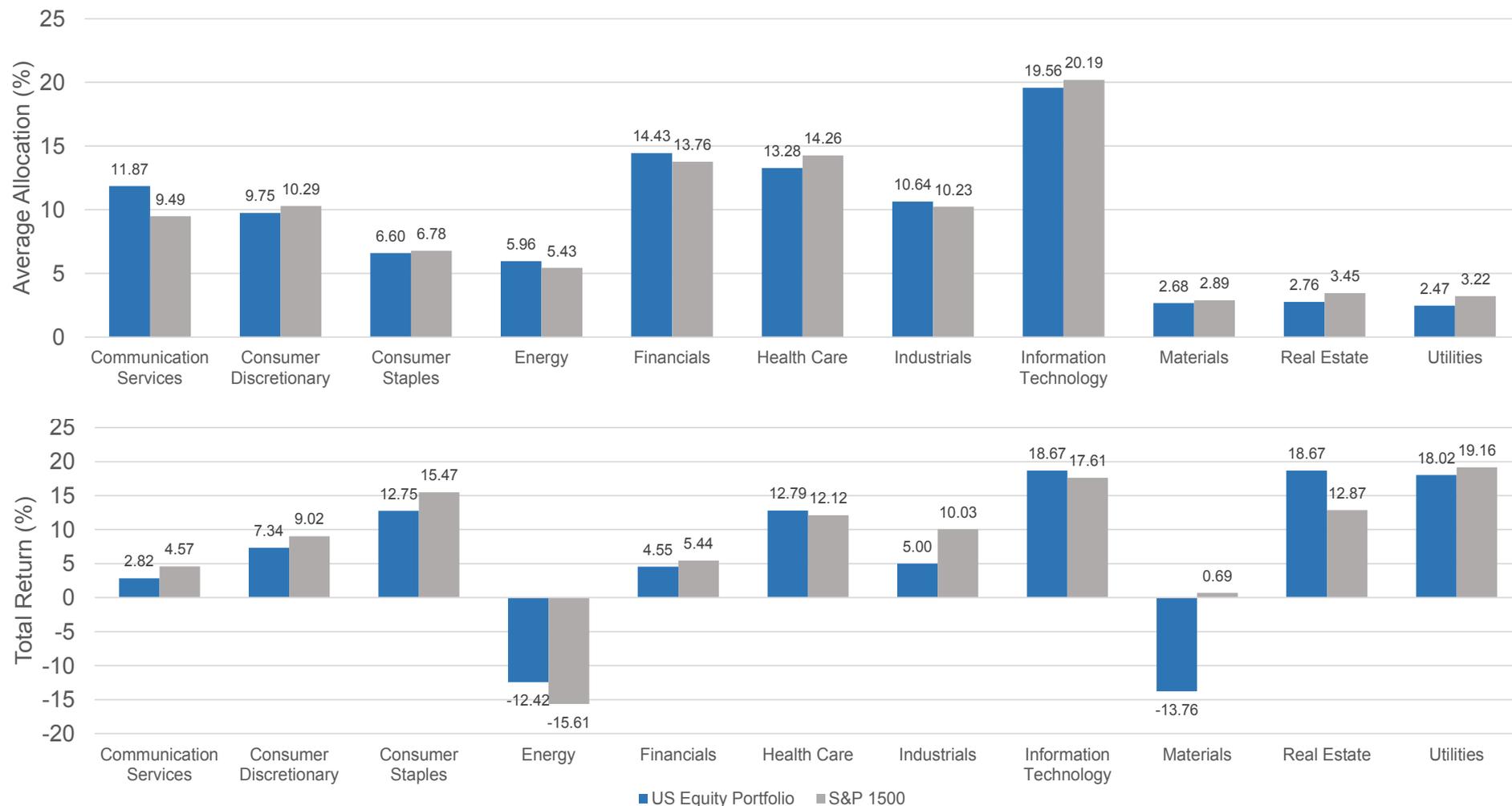
### Annualized Returns

(Periods Ending 6/30/19)

One Year	7.85	9.32	-147
Three Year	13.37	13.91	-54
Five Year	9.04	10.45	-141
Ten Year	14.32	14.73	-41

During FY19, the U.S. Equity portfolio realized favorable absolute returns, but underperformed relative to the benchmark

## FY19 U.S. Equity Review: Sector and Security Selection



During FY19, sector and security selection adversely impacted relative returns

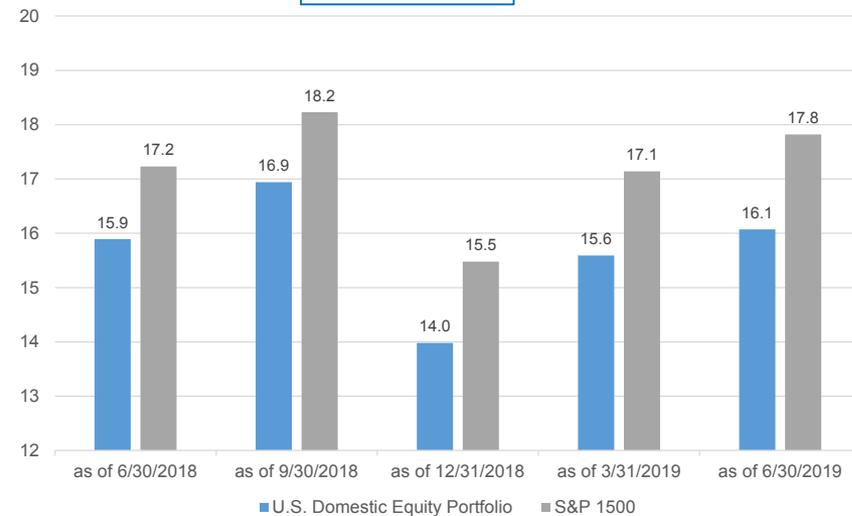
## During FY19, IT & Defensive Sectors Outperformed

Sector	FY 19 Returns	Dividend Yield (6/30/2019)	EPS Growth		Forward P/E	
			Last 3 Years (%)	Estimated 3- 5 Years (%)	as of 6/30/2018	as of 6/30/2019
Utilities	19.16	3.1	6.1	5.7	18.1	20.5
Information Technology	17.61	1.4	19.8	12.6	23.0	25.0
Consumer Staples	15.47	2.8	7.5	6.4	19.2	22.1
Real Estate	12.87	3.5	6.2	9.1	50.1	54.4
Health Care	12.12	1.6	9.3	10.2	14.1	20.9
Industrials	10.03	1.8	19.6	11.3	18.5	18.9
Consumer Discretionary	9.02	1.3	47.8	18.9	49.8	34.6
Financials	5.44	2.1	7.3	9.4	20.3	14.4
Communication Services	4.57	1.4	33.8	13.1	33.0	27.3
Materials	0.69	2.0	13.3	10.4	17.9	21.7
Energy	-15.61	3.3	22.6	11.5	29.0	23.4

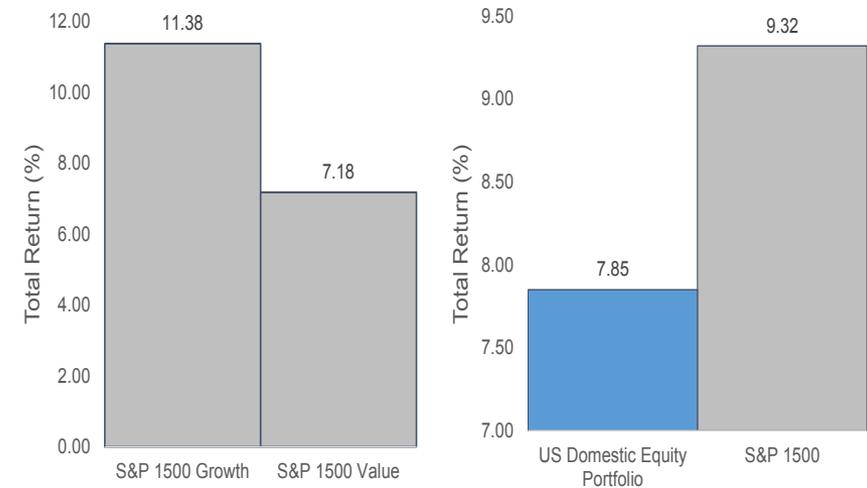
Information Technology and defensive sectors (e.g., high-yielding Utilities and Consumer Staples) outperformed. On balance, sector allocation detracted from relative returns in a bifurcated equity market.

## FY19 U.S. Equity Review: Value vs. Growth

### Valuations

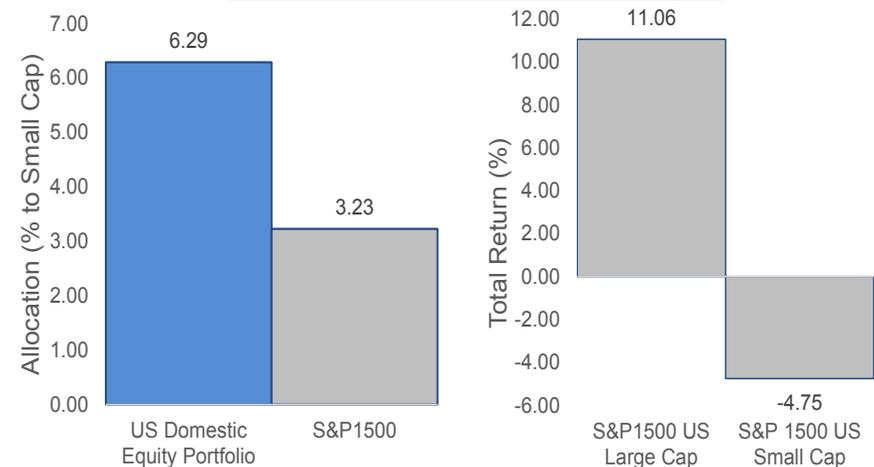


### Growth vs. Value



The U.S. Equity portfolio focused on investments with more attractive valuations. This value bias negatively impacted returns as growth outperformed value. The U.S. Equity portfolio's overweight allocation to small cap equities also impacted returns, as small caps underperformed.

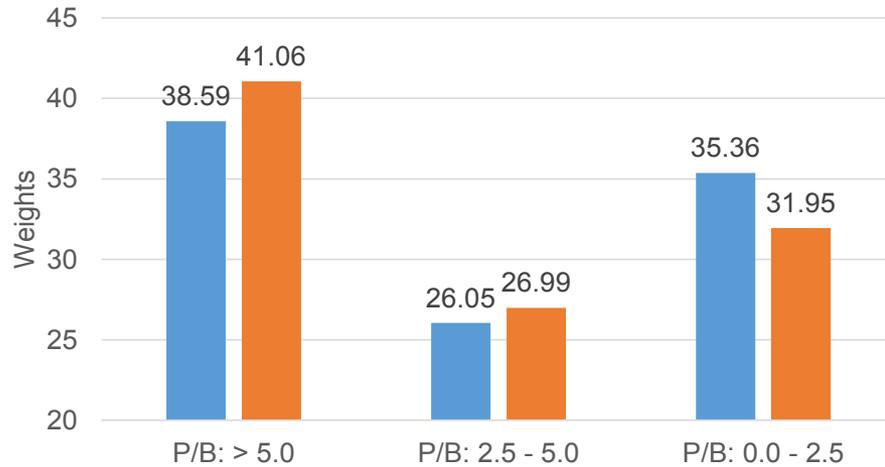
### Large Cap vs. Small Cap



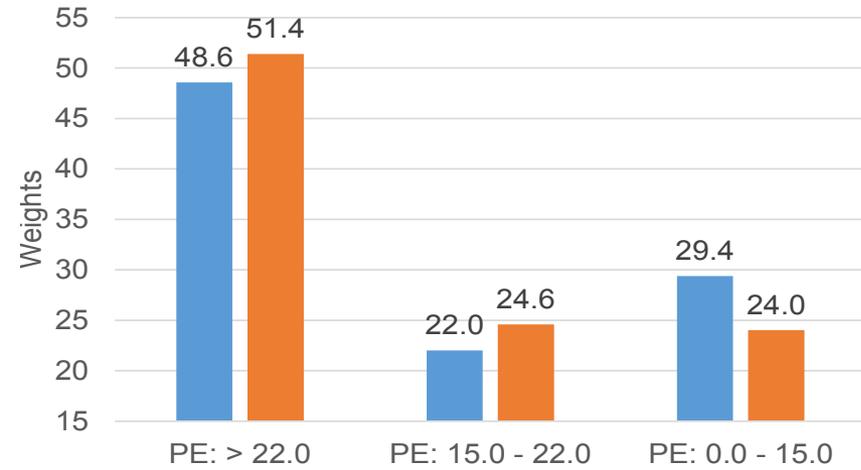
During FY19, the U.S. Equity portfolio's focus on value stocks and small cap stocks impacted relative returns

## FY19 U.S. Equity Review: Value vs. Growth

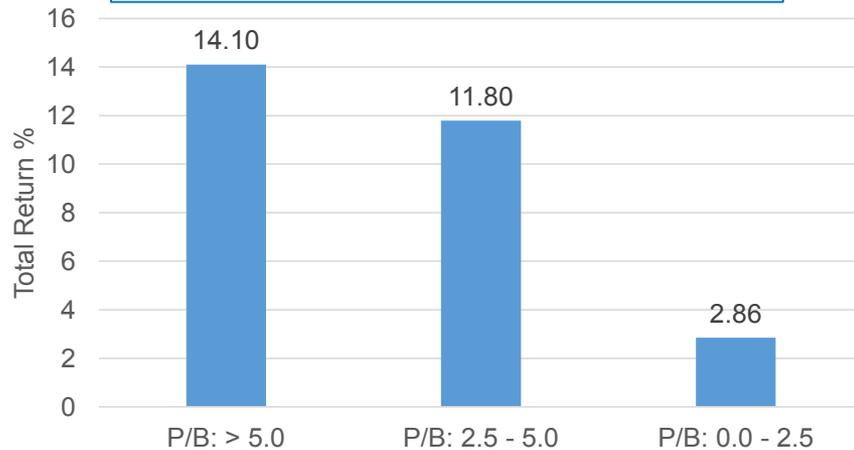
### P/Book: Portfolio vs Benchmark



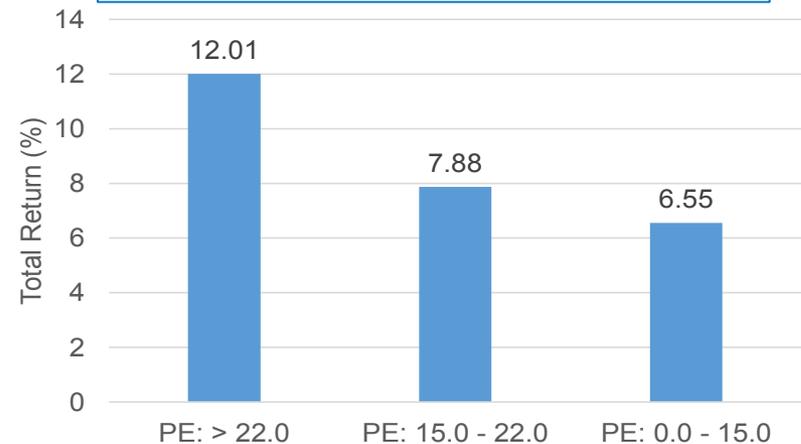
### P/E: Portfolio vs Benchmark



### Benchmark Returns of P/B Groupings



### Benchmark Returns of P/E Groupings



The U.S. Equity portfolio was underweight high value stocks and overweight low value stocks as valuations reached record levels

## FY19 U.S. Equity Review: Security Selection

### FY19 Contributors

<b>Company</b>	<b>Average Portfolio Weight</b>	<b>Average Benchmark Weight</b>	<b>Benchmark Total Return</b>	<b>Relative Contribution</b>
Microsoft Corporation	4.00%	3.34%	38.07%	18 bps
Eli Lilly and Company	0.75%	0.40%	32.65%	16 bps
Merck & Co., Inc.	1.18%	0.76%	41.97%	15 bps
AT&T Inc.	1.59%	0.88%	11.14%	13 bps
Amazon.com, Inc.	3.95%	2.79%	11.40%	12 bps

### FY19 Detractors

<b>Company</b>	<b>Average Portfolio Weight</b>	<b>Average Benchmark Weight</b>	<b>Benchmark Total Return</b>	<b>Relative Contribution</b>
Starbucks Corporation	0.03%	0.33%	75.45%	-17 bps
Astec Industries, Inc.	0.25%	0.00%	-44.91%	-16 bps
AK Steel Holding Corporation	0.22%	0.00%	-45.39%	-14 bps
Eros International PLC Class A	0.11%	0.00%	-89.62%	-14 bps
Western Digital Corporation	0.28%	0.06%	-35.81%	-13 bps

The U.S. Equity portfolio remained well diversified through FY19 with more than 700 individual issues. No single security had an outsized impact on returns.

## U.S. Equity Portfolio as of June 30, 2019

## U.S. Equity Portfolio versus Benchmark – Key Metrics

	<b>P/E</b>	<b>P/CF</b>	<b>P/Book</b>
U.S. Equity Portfolio	16.1	10.7	2.5
S&P 1500 Benchmark	17.8	12.4	3.0

## U.S. Equity Portfolio Top Holdings As Of 6/30/2019

<b>Company</b>	<b>Portfolio Weight</b>
Microsoft Corporation	4.41%
Amazon.com, Inc.	4.08%
Apple Inc.	3.15%
Alphabet Inc. Class C	2.79%
AT&T Inc.	2.13%
Facebook, Inc. Class A	2.11%
JPMorgan Chase & Co.	2.01%
Bank of America Corp	1.59%
Visa Inc. Class A	1.53%
Johnson & Johnson	1.42%

# International Equity Portfolio Review and Outlook

## FY19 International Equity Portfolio Review and FY20 Key Investment Themes

- **During FY19, the International Equity portfolio modestly outperformed the benchmark index, driven primarily by relative returns within the EM portfolio**
  - the Emerging Market (EM) portfolio outperformed by 108 basis points
  - within the Non-US Developed Market (DM) portfolio, an out of benchmark allocation to small cap stocks adversely impacted returns
- **Security Selection was a key driver of relative returns**
  - within the EM portfolio, active strategies including country and security selection added value
  - within the DM portfolio, small cap security selection detracted from relative returns, as the small cap portfolio underperformed its benchmark by 118 basis points
- **Looking ahead into FY20, relative valuations appear attractive but economic and geopolitical risks persist**
  - slowing global growth prospects, elevated trade conflicts, and rising uncertainty ahead of the latest Brexit deadline present a challenging investment environment
  - EM equity markets have broadly struggled in the midst of global trade disputes and a resilient U.S. dollar
  - synchronized global policy accommodation may provide support for financial markets

## International Equity Portfolio: FY19 Performance Review

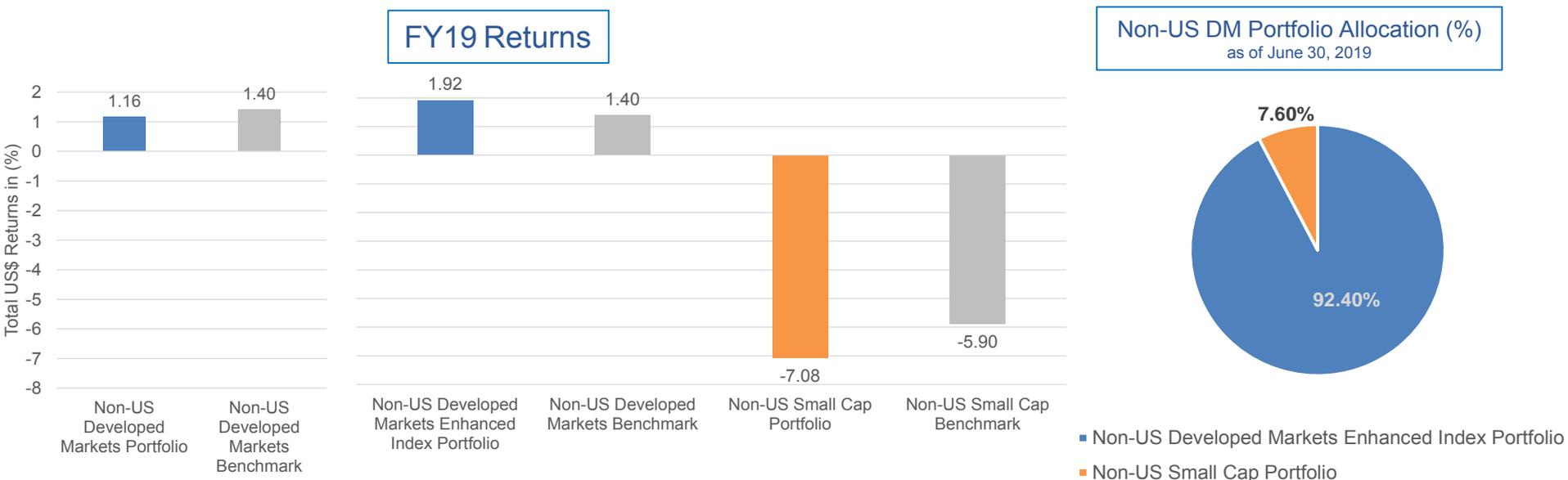
## FY19 International Equity Returns By Asset Class

(Total US\$ Returns in %)

	Quarter Ended								Fiscal Year 2019	
	9/30/2018		12/31/2018		3/31/2019		6/30/2019		NJDOI	Benchmark
	NJDOI	Benchmark	NJDOI	Benchmark	NJDOI	Benchmark	NJDOI	Benchmark		
Non-US Developed Markets (DM) Equities	1.35	1.29	-13.19	-12.69	10.83	10.56	3.74	3.71	1.16	1.40
Emerging Market (EM) Equities	-0.93	-1.31	-6.88	-7.27	9.56	9.95	1.30	0.67	2.38	1.30
Total International Equity	0.52	0.37	-10.92	-10.73	10.35	10.35	2.82	2.62	<b>1.59</b>	<b>1.47</b>

During FY19, the International Equity Portfolio outperformed its benchmark by 12 basis points (1.59% vs 1.47%), driven by favorable relative returns in the EM Portfolio. Detracting from relative returns was the non-benchmark allocation to small cap equities.

## FY19 Review: Non U.S. Developed Markets (DM) Portfolio

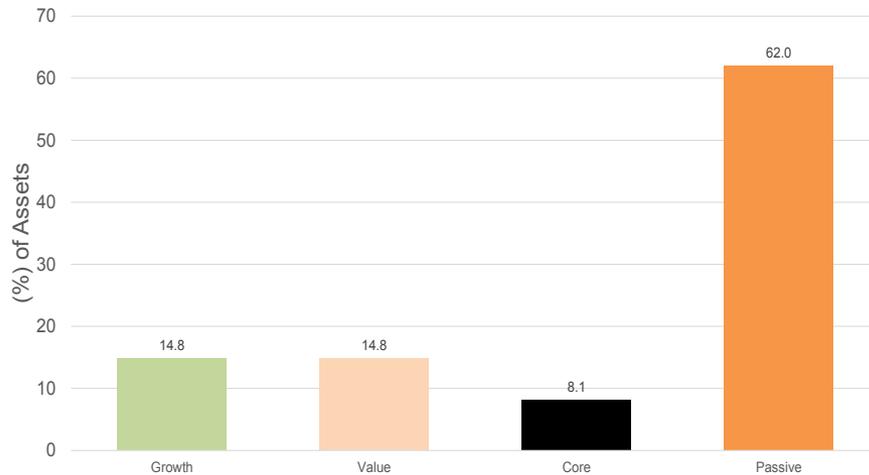


- During FY19, the Non-US Developed Markets Equity (DM) portfolio underperformed by 0.24%
- The DM Portfolio includes an Enhanced Index Portfolio and a Small Cap Portfolio
  - the Enhanced Index Portfolio outperformed its benchmark index by 52 basis points
  - the Small Cap Portfolio underperformed its benchmark by 1.18%
    - within the Small Cap Portfolio, security selection and an underweight allocation to Real Estate (-7%) adversely impacted relative returns

The Non-US Developed Markets portfolio underperformed by 0.24% (1.16% vs. 1.40%) during FY19, driven by an allocation to small cap equities

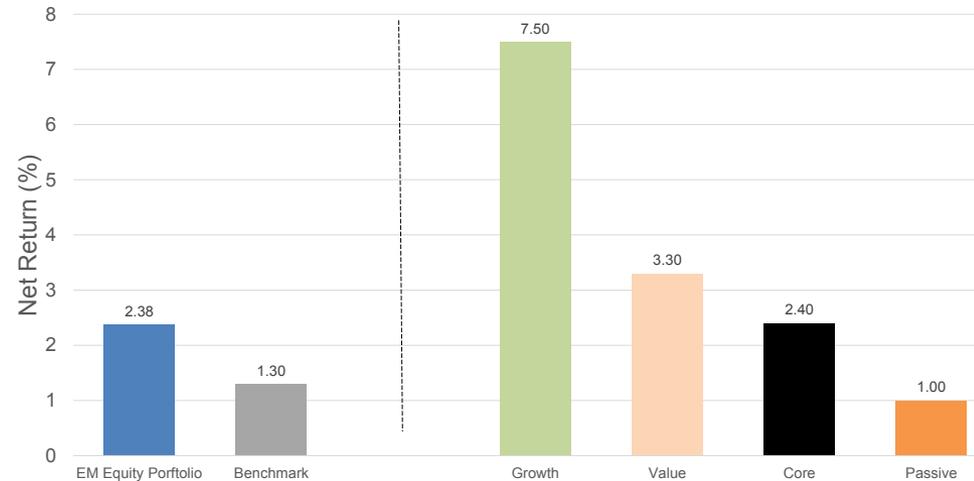
## FY19 Review: Emerging Markets (EM) Portfolio

### FY19 EM Portfolio Style Allocation – as of June 30, 2019

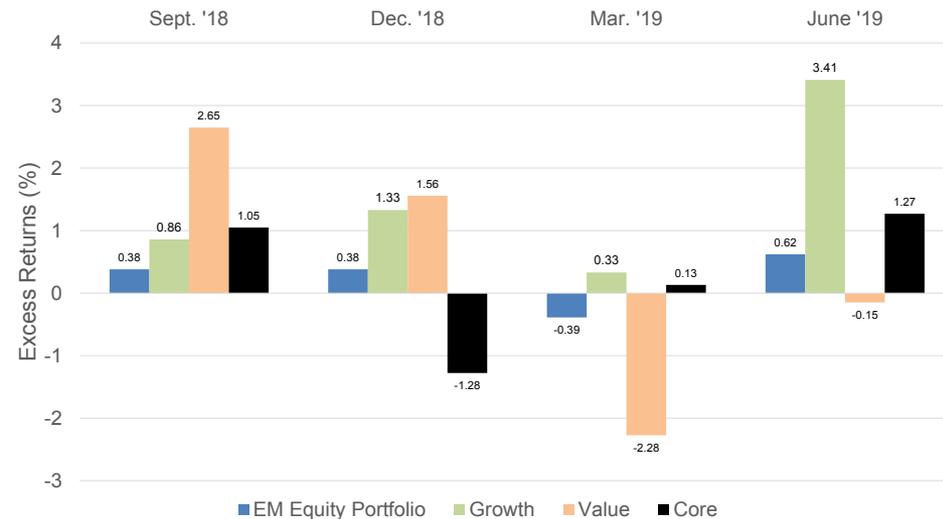


During FY19, the EM portfolio remained well diversified across style strategies. Growth, Value, and Core strategies drove excess returns through favorable stock selection and country allocation. Style diversification proved beneficial as value outperformed during the first half of the fiscal year and growth outperformed during the second half of the fiscal year.

### FY19 EM Portfolio Returns by Style



### FY19 EM Portfolio Style Excess Returns by Quarter



During FY19, active strategies added value to the EM portfolio.

# Fixed Income Portfolio Review and Outlook

## FY19 Fixed Income Portfolio Review and FY20 Key Investment Themes

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- **During FY19, the Fixed Income portfolio underperformed its benchmark index by 39 basis points**
  - the key driver of relative returns was the underperformance of the Global Diversified Credit (GDC) portfolio
  - the Investment Grade (IG) portfolio, which represents approximately half of the total allocation to Fixed Income, realized strong absolute and relative returns
- **Within the Fixed Income portfolio:**
  - the GDC portfolio is comprised of private credit strategies that lagged the public high yield market over the past year
    - the GDC portfolio has outperformed high yield for the three and five year periods by 296 and 316 basis points, respectively, on an annualized basis
  - the IG portfolio benefitted from positive sector selection, new issue concessions in the primary market, and a commitment to select BBB credits
  - within the U.S. Government portfolio, an underweight position in the long end of the yield curve adversely impacted relative returns as the yield curve flattened
  - High Yield (HY) underperformed by 73 basis points, due primarily to security selection
- **Looking ahead to FY20, a cautious approach is warranted amid heightened economic uncertainty**
  - growth in the U.S. economy, while still positive, has shown signs of deceleration
  - credit spreads remain tight in a historical context
  - geopolitical risks, including trade disputes, persist

## The Fixed Income Portfolio Has Realized a Long-Term Track Record of Outperformance

(Total Return in %)

Fiscal Year	New Jersey Division of Investment Fixed Income Portfolio	Fixed Income Benchmark	Relative Outperformance (in basis points)
2010	16.73	16.49	24
2011	5.96	3.20	276
2012	15.87	16.50	-63
2013	1.70	0.87	83
2014	7.62	7.45	17
2015	1.76	0.52	124
2016	4.90	4.93	-3
2017	5.14	4.89	25
2018	2.26	0.54	172
2019	8.00	8.39	-39

### Annualized Returns

(Periods Ending 6/30/19)

One Year	8.00	8.39	-39
Three Year	5.11	4.56	55
Five Year	4.39	3.81	58
Ten Year	6.88	6.23	65

While the Fixed Income portfolio underperformed its benchmark in FY19, it has outperformed its benchmark in seven of the past ten fiscal years. Over the past decade, the Fixed Income portfolio has outperformed its benchmark by 65 basis points (annualized).

## Fixed Income Portfolio: Fiscal Year 2019 Performance Review

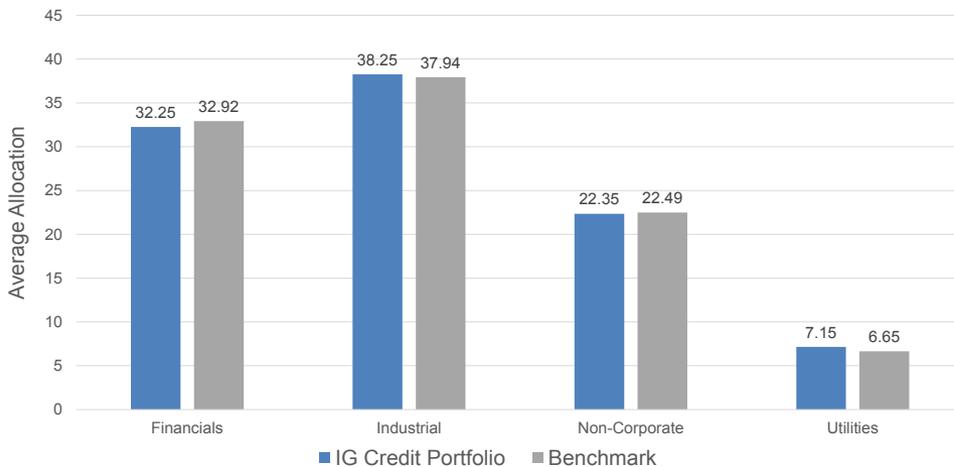
### FY19 Fixed Income Returns By Portfolio

Sector	Quarter Ended								Fiscal Year 2019	
	9/30/2018		12/31/2018		3/31/2019		6/30/2019		NJDOI	Benchmark
	NJDOI	Benchmark	NJDOI	Benchmark	NJDOI	Benchmark	NJDOI	Benchmark		
Short Term Cash Equivalents	0.74	0.49	0.80	0.56	1.01	0.60	1.07	0.64	3.67	2.31
U.S. Government	-0.54	-0.59	2.33	2.57	2.01	2.11	2.79	3.01	6.72	7.24
Investment Grade (IG)	0.58	0.52	1.19	0.77	4.15	4.05	3.84	3.82	10.07	9.42
High Yield (HY)	2.32	2.40	-4.82	-4.53	7.00	7.26	2.44	2.50	6.75	7.48
Global Diversified Credit (GDC)	0.93	2.40	-0.07	-4.53	1.05	7.26	3.81	2.50	5.79	7.48
<b>Total Fixed Income</b>	<b>0.71</b>	<b>1.06</b>	<b>0.51</b>	<b>-0.98</b>	<b>3.05</b>	<b>4.95</b>	<b>3.54</b>	<b>3.21</b>	<b>8.00</b>	<b>8.39</b>

During FY19, the Fixed Income portfolio underperformed its benchmark, driven largely by relative returns in the GDC portfolio. Strong absolute and relative returns in the IG portfolio added value.

## FY19 Fixed Income Review: Investment Grade Credit Sector Allocation & Returns

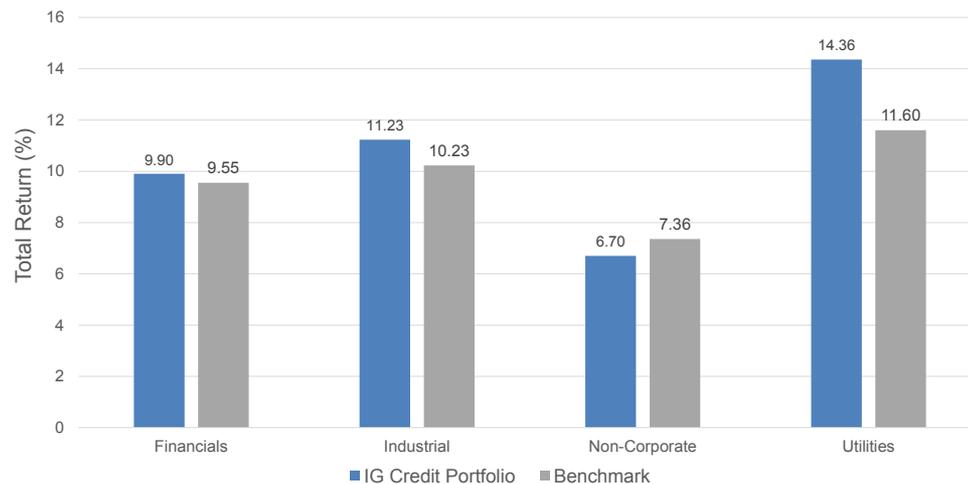
### FY19 IG Credit Portfolio Sector Allocation vs. Benchmark



During FY19, sector allocation was a positive driver of returns for the IG Credit portfolio as Industrials (+11.23%) outperformed Financials (+9.90%). An overweight allocation to Utilities also proved beneficial as Utilities outperformed.

Investment grade credit was the best performing asset class in the financial markets, with strong returns across sectors.

### FY19 IG Credit Portfolio Sector Returns vs. Benchmark



During FY19, the IG Credit portfolio outperformed the broader Total Pension Fund. Within the IG portfolio, sector selection added value.

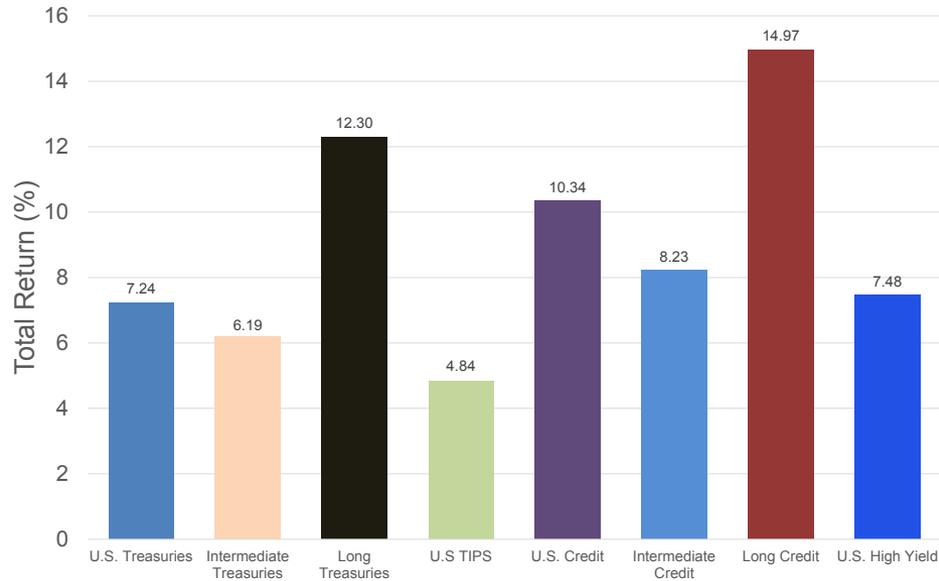
## The Global Diversified Credit (GDC) Portfolio Underperformed in FY19

- **During FY19, the GDC portfolio underperformed the Bloomberg Barclays US High Yield Index by 169 basis points**
  - key factors impacting relative returns included:
    - investments in U.S. structured credit that underperformed strong public high yield returns
    - exposure to European credit
    - hedging strategies that dampened interest rate and credit risk in an environment of falling yields and tightening credit spreads
  - performance was idiosyncratic and GP dependent
    - certain U.S. structured credit and transatlantic opportunistic credit investments underperformed
    - other transatlantic structured credit and global opportunistic credit investments outperformed
    - direct lending at the upper end of the U.S. market underperformed
    - direct lending in the U.S. middle market outperformed
  - the GDC portfolio has outperformed the benchmark over most time periods, benefitting from alpha generation and an illiquidity premium
    - annualized excess returns of 2.96% over the trailing 3 years
    - annualized excess returns of 3.16% over the trailing 5 years
    - annualized excess returns of 4.44% over the trailing 7 years
- **The Division's GDC portfolio is predominantly invested across North America and Europe into opportunistic credit, structured credit, direct lending, distressed credit, real estate credit and special situations strategies**
  - no benchmark exists to accurately track the diversity of the GDC portfolio
  - the public high yield benchmark reflects the Division's view of its opportunity cost of capital
- **The GDC portfolio is currently above its target asset allocation as it has outperformed the broader pension portfolio over the long term and its illiquid nature has limited the Division from rebalancing out of GDC**
  - the Division has slowed its annual pacing of future commitments to the space

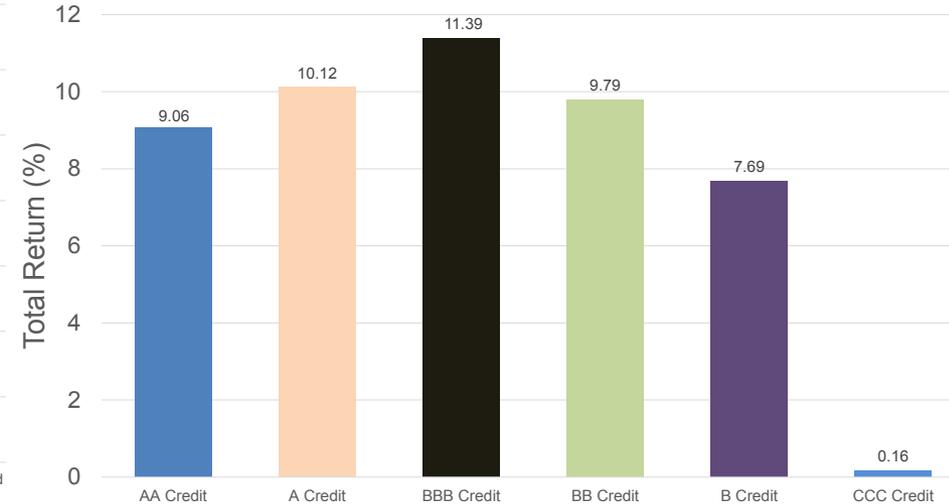
Notwithstanding underperformance during FY19, the GDC portfolio has realized strong absolute and relative returns over time

## FY19 Fixed Income Review: Sector, Quality and Yield Curve Returns

### FY19 Select Sector and Yield Curve Returns



### FY19 Select Quality Returns



During FY19, Long Credit and Long Treasuries outperformed as the Treasury yield curve flattened and longer-dated yields declined. Exiting the TIPS market and moving to nominal Treasuries added value. The High Yield (HY) portfolio had strong absolute returns, but underperformed on a relative basis.

During FY19, Investment Grade Credit (IG) outperformed HY. Within IG, lower quality (BBB) outperformed, while lower quality (CCC) underperformed in HY. Strong fiscal year returns were driven by a sharp move to lower rates during the second half of FY19.

**Investment Grade Credit was the top performer in FY19, driven in part by quality selection**