

*Helping Clients Prosper.*



DiMeo SCHNEIDER  
& ASSOCIATES, L.L.C.

# City of Torrington Pension Plans

Quarterly Investment Review - Fourth Quarter 2020

1/29/2021 11:05 AM  
RECEIVED FOR RECORD  
TORRINGTON TOWN CLERK

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# 2020 YEAR-END FIRM UPDATE

## FIRM MILESTONES

- ✓ DiMeo Schneider and Fiduciary Investment Advisors, LLC (“FIA”) joined forces as one combined firm
- ✓ Celebrated our 25<sup>th</sup> Anniversary on May 1, 2020
- ✓ Experienced growth in each of our service areas:
  - Retirement Plans
  - Endowments and Foundations
  - Private Clients
  - Financial Institutions
- ✓ Surpassed \$195 billion in assets under advisement<sup>1</sup>
- ✓ Established a successful summer inTURNship program for college seniors and recent college graduates

## NEW TEAM MEMBERS IN 2020 – WELCOME!

- Performance Analyst - Peter Goode
- Client Service Associate – The Wealth Office® - Lindsay Green
- Director of Finance & Accounting - Monica Harrison
- Performance Analyst - Ellen Kazembe
- Client Analyst - Eric Kraus
- Client Analyst - Griffin Olejarz
- Marketing Associate - Deb Ranicar
- Financial Wellness Coordinator - David Reynolds
- Client Service Associate – The Wealth Office® - Nick Santangelo
- Research Associate – Global Public Markets - Kedar Satyanand
- Chief Compliance Officer - Lisa Tamburini
- Chief Operating Officer - Julie Vander Weele
- Performance Analyst - Matt Witt

<sup>1</sup>As of June 30, 2020.

# 2020 YEAR-END FIRM UPDATE

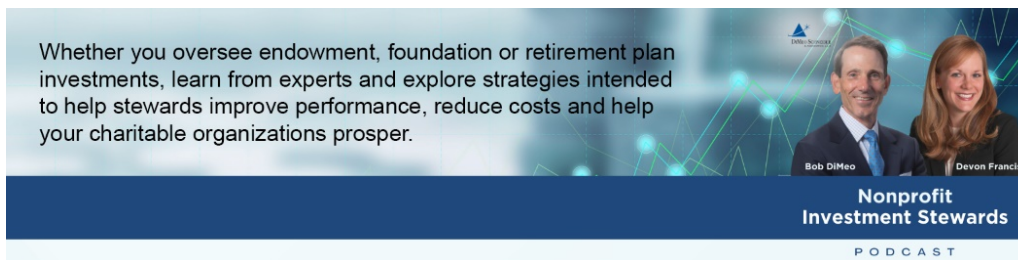
## INDUSTRY RECOGNITION\*

- ✓ Ranked #1 - **Top 50 Institutional Consulting Teams** by *Barron's*
- ✓ Named one of *P&I's* 2020 **Best Places to Work in Money Management**
- ✓ Ranked in the **Top 25 Worldwide Consultants** (by institutional assets under advisement as of June 30, 2020) by *Pensions & Investments*

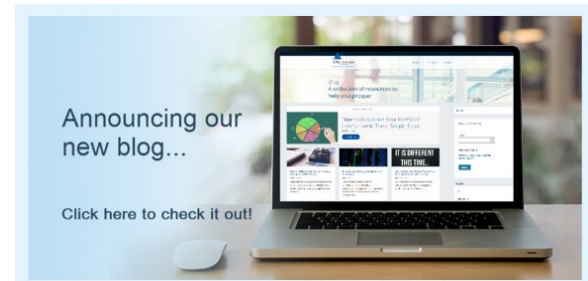
## KEEPING YOU INFORMED

In 2020 we launched our new blog and the Nonprofit Investment Stewards podcast!

[dimeoschneider.com/podcast](https://dimeoschneider.com/podcast)



[dimeoschneider.com/blog](https://dimeoschneider.com/blog)



\*Please see disclosures at the end of the document.

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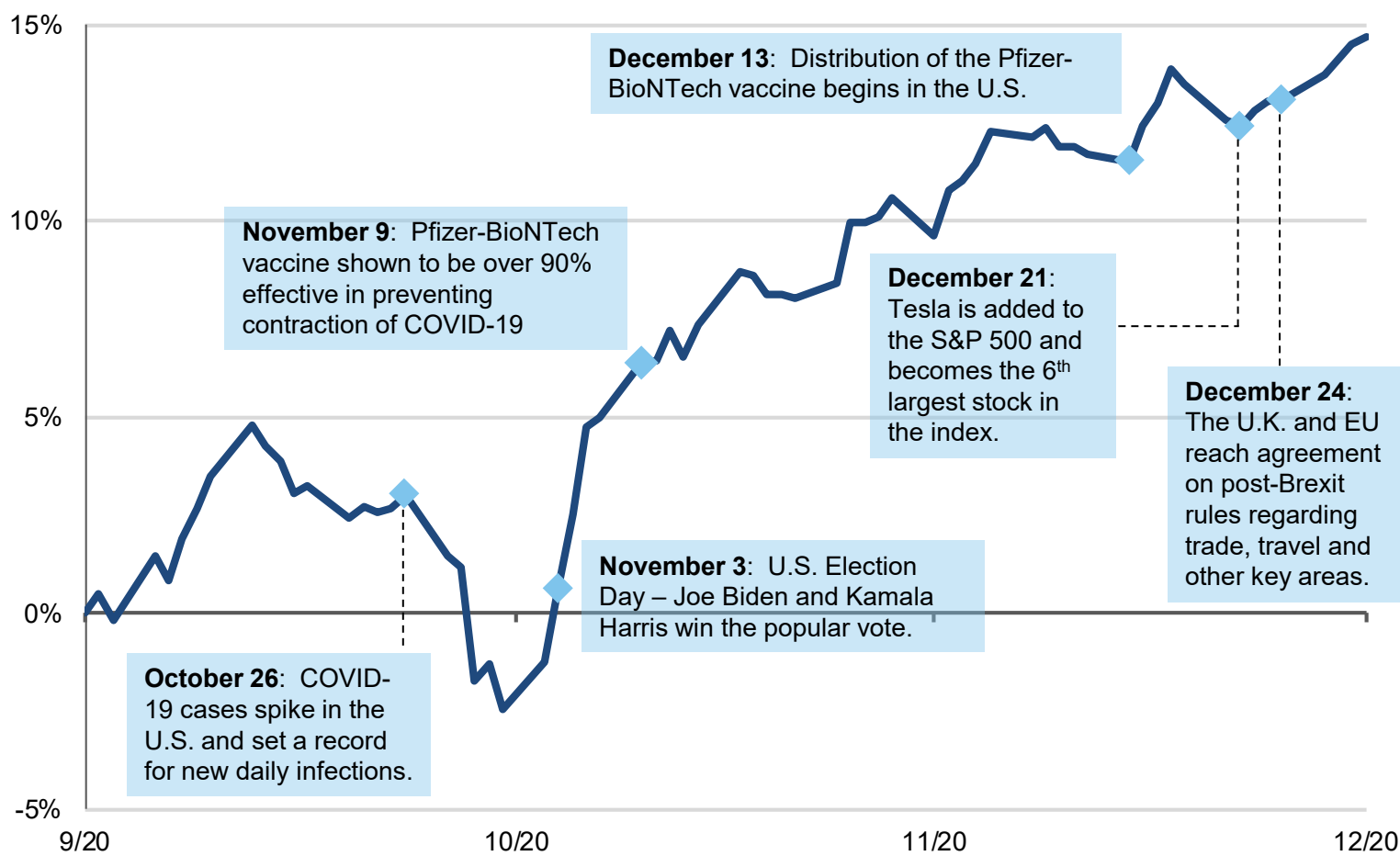
Section 1	Market Overview
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Section 5	Fiduciary Governance Calendar



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# 4Q 2020 MARKET EVENTS

Global Equity Total Return (9/30/20 - 12/31/20)



## Key 1Q 2021 Dates

### January

**5:** Georgia U.S. Senate runoff

**20:** U.S. presidential inauguration

**28:** First estimate of 4Q U.S. GDP

### March

**16-17:** FOMC Meeting

Source: Bloomberg as of 12/31/20. Global Equity represented by MSCI ACWI Net Total Return USD Index. Past performance does not indicate future performance and there is a possibility of a loss.



# FINANCIAL MARKETS PERFORMANCE

Global Fixed Income Markets	QTD	YTD	1YR	3YR	5YR	7YR	10YR	15YR
Bloomberg Barclays 1-3-Month T-Bill	0.0%	0.5%	0.5%	1.5%	1.1%	0.8%	0.6%	1.2%
Bloomberg Barclays U.S. TIPS	1.6%	11.0%	11.0%	5.9%	5.1%	3.9%	3.8%	4.3%
Bloomberg Barclays Municipal Bond (5 Year)	0.8%	4.3%	4.3%	3.8%	2.8%	2.8%	3.0%	3.7%
Bloomberg Barclays High Yield Municipal Bond	4.5%	4.9%	4.9%	6.7%	6.6%	6.9%	6.9%	5.4%
Bloomberg Barclays U.S. Aggregate	0.7%	7.5%	7.5%	5.3%	4.4%	4.1%	3.8%	4.5%
Bloomberg Barclays U.S. Corporate High Yield	6.5%	7.1%	7.1%	6.2%	8.6%	5.7%	6.8%	7.5%
Bloomberg Barclays Global Aggregate ex-U.S. Hedged	0.9%	3.9%	3.9%	4.9%	4.4%	4.6%	4.4%	4.3%
Bloomberg Barclays Global Aggregate ex-U.S. Unhedged	5.1%	10.1%	10.1%	4.2%	4.9%	2.1%	2.0%	3.7%
Bloomberg Barclays U.S. Long Gov / Credit	1.7%	16.1%	16.1%	9.8%	9.3%	8.8%	8.2%	7.4%
JPMorgan GBI-EM Global Diversified	9.6%	2.7%	2.7%	3.0%	6.7%	1.5%	1.5%	5.1%
Global Equity Markets	QTD	YTD	1YR	3YR	5YR	7YR	10YR	15YR
S&P 500	12.1%	18.4%	18.4%	14.2%	15.2%	12.9%	13.9%	9.9%
Dow Jones Industrial Average	10.7%	9.7%	9.7%	9.9%	14.6%	11.8%	13.0%	10.0%
NASDAQ Composite	15.7%	45.1%	45.1%	24.5%	22.2%	18.9%	18.6%	13.8%
Russell 3000	14.7%	20.9%	20.9%	14.5%	15.4%	12.8%	13.8%	10.0%
Russell 1000	13.7%	21.0%	21.0%	14.8%	15.6%	13.0%	14.0%	10.1%
Russell 1000 Growth	11.4%	38.5%	38.5%	23.0%	21.0%	17.5%	17.2%	12.5%
Russell 1000 Value	16.2%	2.8%	2.8%	6.1%	9.7%	8.2%	10.5%	7.3%
Russell Mid Cap	19.9%	17.1%	17.1%	11.6%	13.4%	10.9%	12.4%	9.7%
Russell Mid Cap Growth	19.0%	35.6%	35.6%	20.5%	18.7%	14.8%	15.0%	11.5%
Russell Mid Cap Value	20.4%	5.0%	5.0%	5.3%	9.7%	8.2%	10.5%	8.3%
Russell 2000	31.4%	20.0%	19.9%	10.2%	13.2%	9.3%	11.2%	8.9%
Russell 2000 Growth	29.6%	34.6%	34.6%	16.2%	16.3%	12.1%	13.5%	10.7%
Russell 2000 Value	33.3%	4.6%	4.6%	3.7%	9.6%	6.2%	8.6%	6.9%
MSCI ACWI	14.7%	16.3%	16.3%	10.1%	12.3%	8.9%	9.1%	7.2%
MSCI ACWI ex. U.S.	17.0%	10.7%	10.7%	4.9%	8.9%	4.8%	4.9%	4.9%
MSCI EAFE	16.0%	7.8%	7.8%	4.3%	7.4%	4.4%	5.5%	4.5%
MSCI EAFE Growth	13.1%	18.3%	18.3%	9.7%	10.5%	7.3%	7.5%	6.1%
MSCI EAFE Value	19.2%	-2.6%	-2.6%	-1.2%	4.2%	1.3%	3.4%	2.7%
MSCI EAFE Small Cap	17.3%	12.3%	12.3%	4.9%	9.4%	7.2%	7.8%	6.1%
MSCI Emerging Markets	19.7%	18.3%	18.3%	6.2%	12.8%	6.2%	3.6%	6.6%
Alternatives	QTD	YTD	1YR	3YR	5YR	7YR	10YR	15YR
Consumer Price Index*	0.2%	0.9%	0.9%	1.7%	1.9%	1.5%	1.7%	1.9%
FTSE NAREIT Equity REITs	11.6%	-8.0%	-8.0%	3.4%	4.8%	7.8%	8.3%	6.5%
S&P Developed World Property x U.S.	14.4%	-4.7%	-4.7%	2.1%	6.0%	4.7%	5.8%	4.8%
S&P Developed World Property	13.0%	-6.2%	-6.2%	2.7%	5.3%	6.0%	6.8%	5.4%
Bloomberg Commodity Total Return	10.2%	-3.1%	-3.1%	-2.5%	1.0%	-5.8%	-6.5%	-4.0%
HFRI Fund of Funds Composite*	4.4%	7.1%	7.1%	3.7%	3.8%	3.2%	3.0%	2.8%
HFRI Fund Weighted Composite*	6.1%	7.0%	7.0%	4.0%	5.2%	4.0%	3.7%	4.4%
Alerian MLP	32.4%	-28.7%	-28.7%	-12.7%	-5.9%	-8.9%	-2.3%	3.6%

\*One month lag.

Source: Bloomberg as of 12/31/20. Total returns as of 12/31/20. Periods greater than 1 year are annualized. All returns are in U.S. dollar terms. Past performance does not indicate future performance and there is a possibility of a loss.

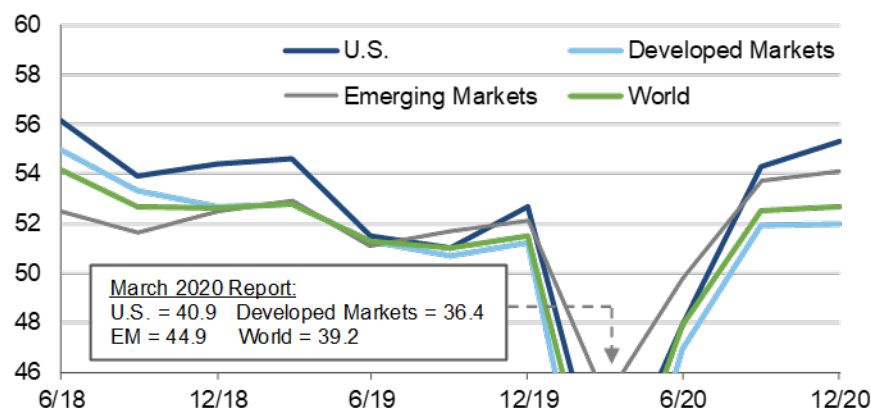


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# ECONOMIC REVIEW

## PMI Composites

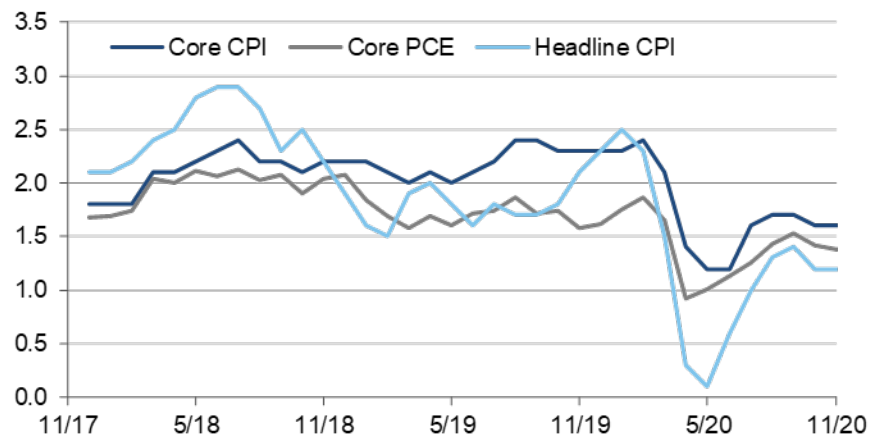
PMI data has been on a positive trajectory since March 2020 with business activity recovering at an accelerated pace through the fourth quarter.



Sources: Markit, JPMorgan. Subject to one-month lag.

## U.S. Inflation

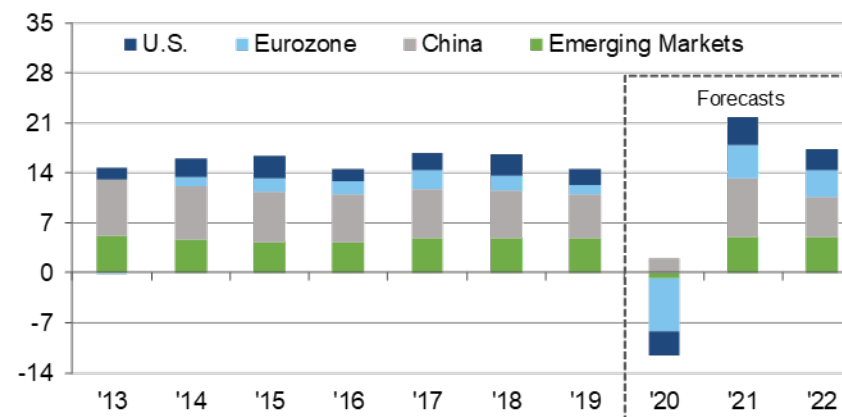
Inflation remains well below the Fed's 2% target, although pandemic-induced stimulus may cause inflation to rise in 2021.



Sources: Bureau of Labor Statistics (BLS), Bureau of Economic Analysis (BEA).  
Subject to one-month lag

## Real GDP Growth (YoY)

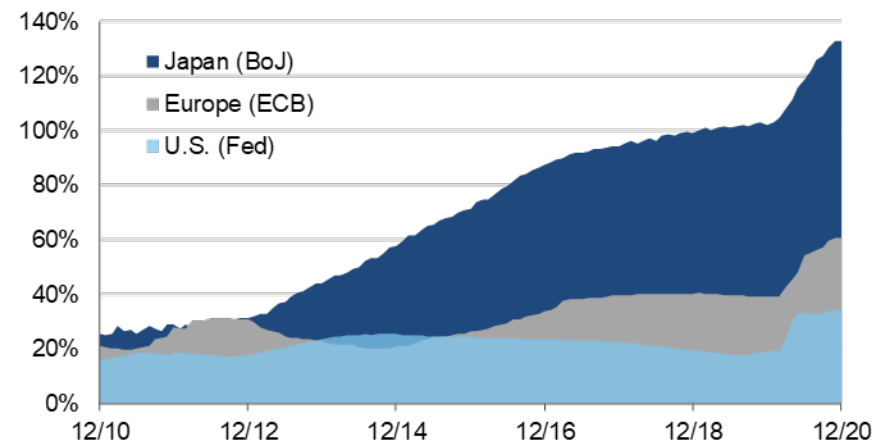
GDP growth forecasts for 2020 remain negative for most of the world except China; however, estimates for 2021 and beyond are more optimistic.



Source: Bloomberg. Forecasts based on Bloomberg survey.

## Central Bank Balance Sheets as a Percentage of GDP

Despite unprecedented levels of monetary easing, the Fed has a lot more policy room to support economic activity.



Source: Bloomberg

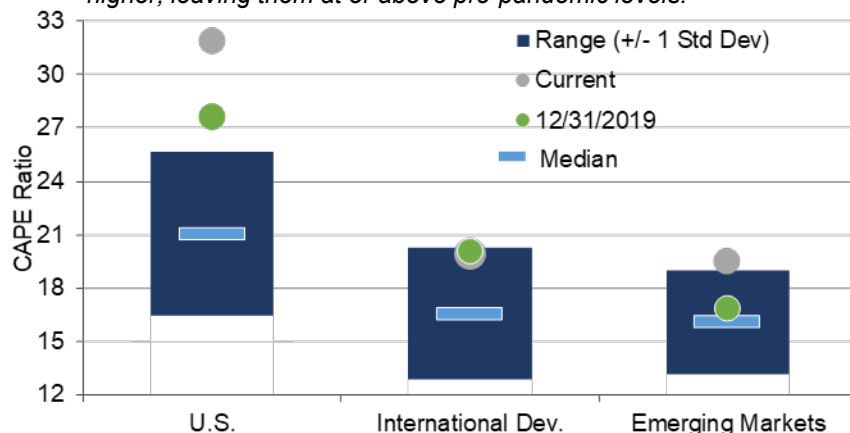


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# EQUITY MARKET UPDATE

## Equity Valuations (Trailing 15 Years)

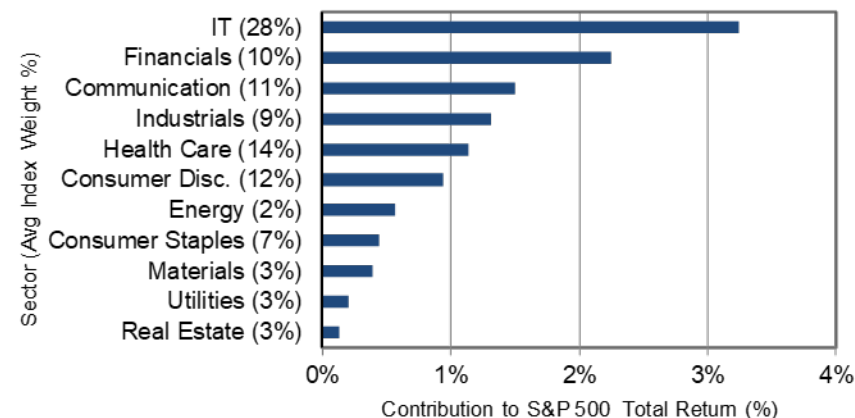
*Incredibly strong fourth quarter returns pushed equity valuations even higher, leaving them at or above pre-pandemic levels.*



Source: MSCI as of 12/31/20. U.S = USA Price Return USD Index, Int. Dev = World Excluding United States Index, EM = Emerging Markets Index.

## U.S. Equities – Contribution to Return by Sector (4Q20)

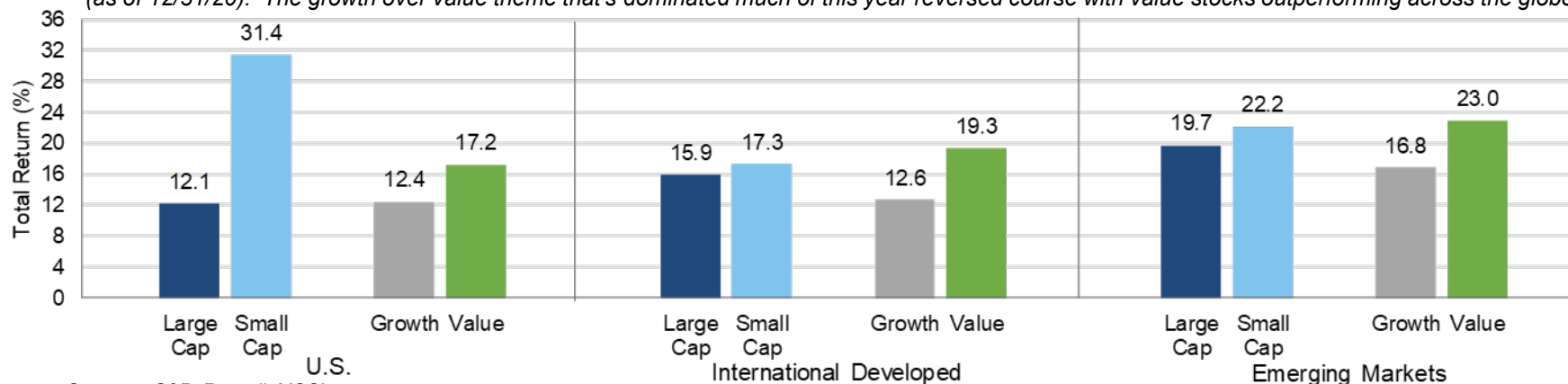
*Tech was the largest contributor to performance given its sizable weight (28%), but financials at a 10% weight also had a meaningful contribution.*



Source: S&P.

## Market Capitalization and Style Performance (4Q 2020)

*U.S. small caps were the clear winners in the fourth quarter and returned over 30%, which brought the year-to-date return from -9% (as of 9/30/20) to +20% (as of 12/31/20). The growth over value theme that's dominated much of this year reversed course with value stocks outperforming across the globe.*



Sources: S&P, Russell, MSCI.

See disclosures for list of indices representing each asset class, region or country. CAPE = cyclically adjusted price/earnings ratio. Past performance does not indicate future performance and there is a possibility of a loss.



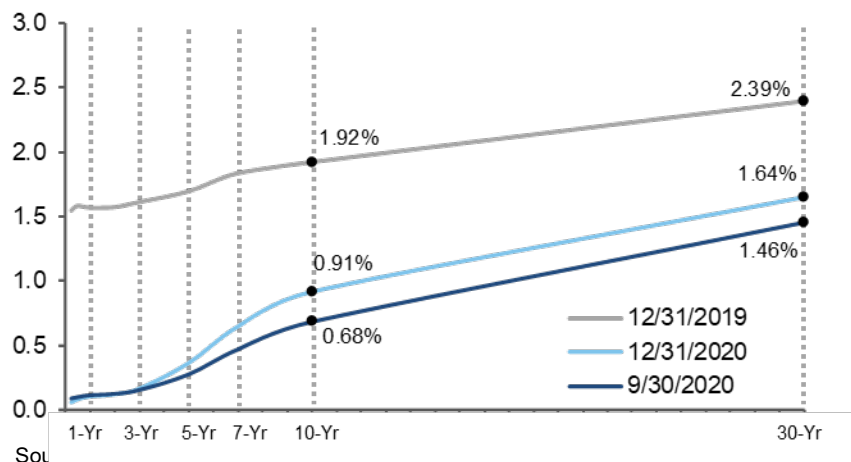


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# FIXED INCOME MARKET UPDATE

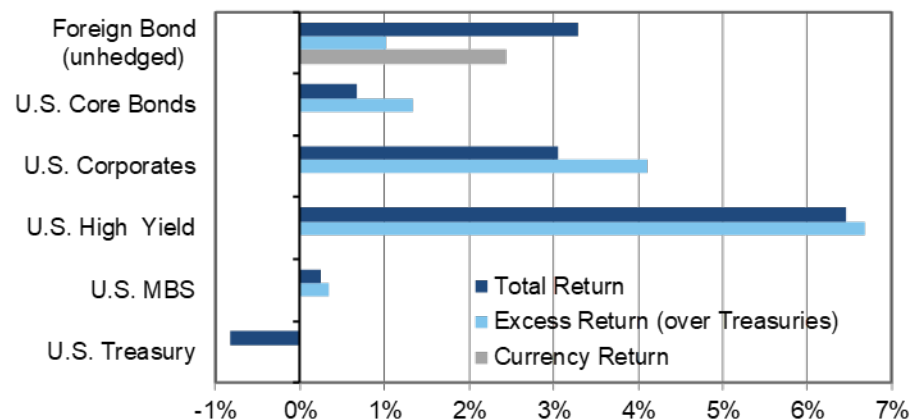
## U.S. Treasury Curve

The Treasury curve steepened in the fourth quarter with intermediate and long-dated yields rising to levels investors haven't seen since March 2020.



## Index Performance Attribution (4Q 2020)

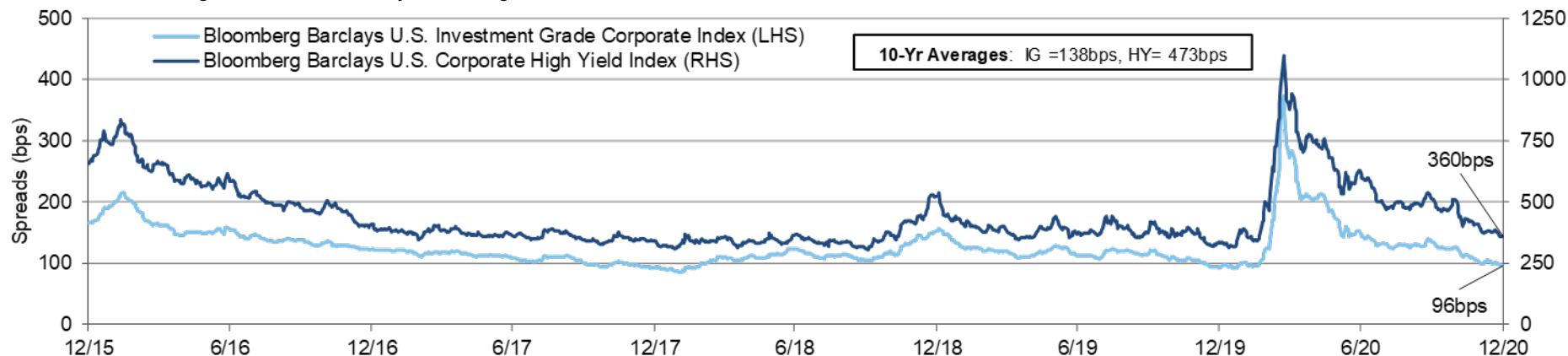
Spread tightening outpaced the rise in Treasury rates, which benefitted riskier parts of the market. U.S. dollar weakness helped foreign bonds.



Source: Bloomberg.

## Credit Market Spreads – Trailing 5 Years

Investment grade and high yield spreads had a strong finish to the year tightening 40bps and 157bps, respectively. Investment grade and high yield spreads are now trading well inside their 10-year averages.



Source: Bloomberg.

See disclosures for list of indices representing each asset class.

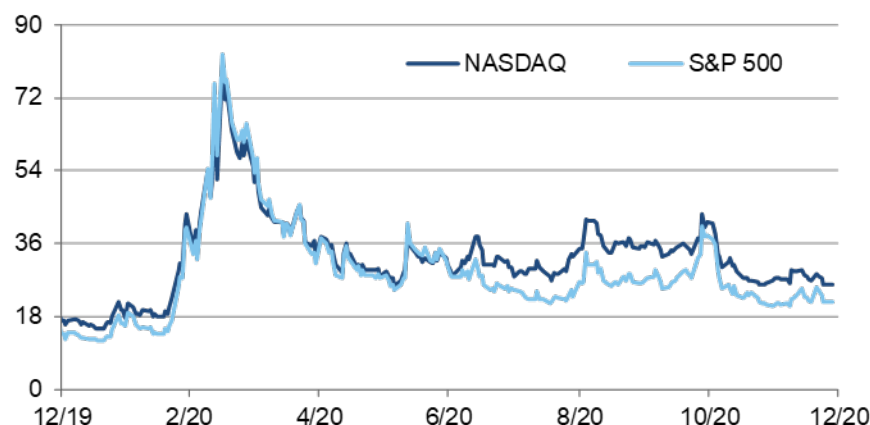


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# MARKET THEMES

## Volatility – S&P 500 and NASDAQ

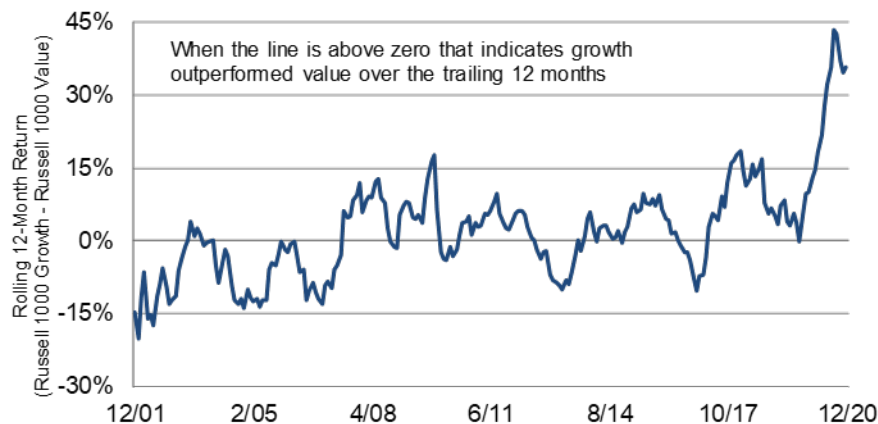
Equity volatility rose in October amid increasing COVID cases but has trended lower and is nearing longer-term averages.



Source: Bloomberg

## Equity – Growth vs. Value

Styles have historically come in and out of favor, but COVID has served as a tailwind for technology and other service-related growth companies.

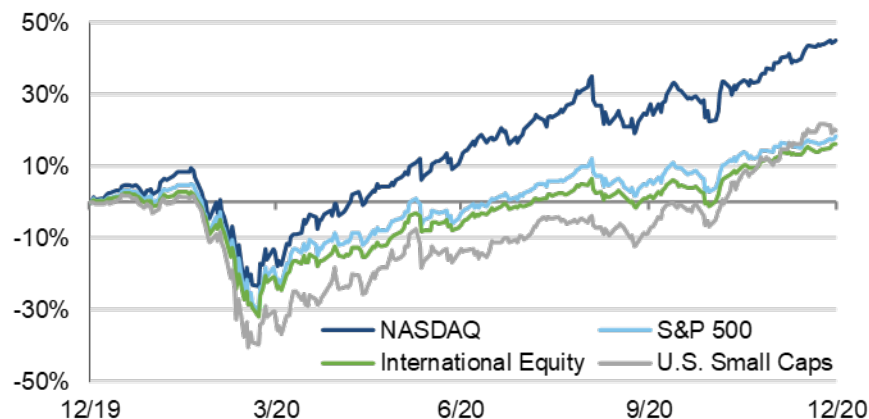


Source: Russell.

Past performance does not indicate future performance and there is a possibility of a loss.

## Equity Performance – Sector, Region, Market Cap

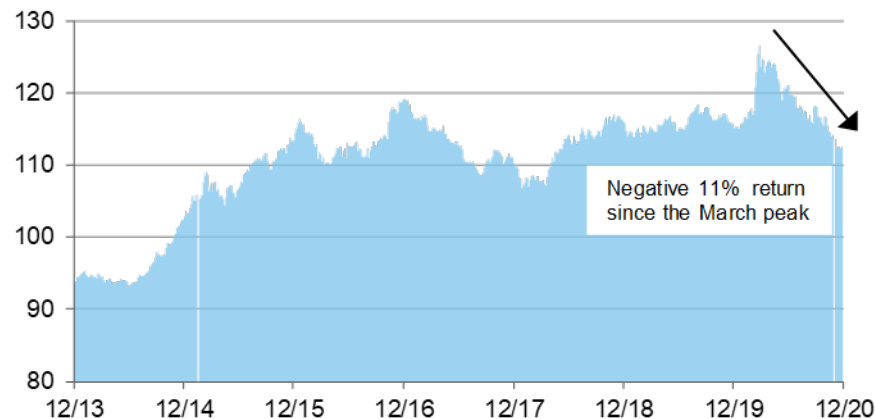
Tech stocks were the clear winners in 2020, but U.S. small caps had a stellar fourth quarter which meaningfully boosted the full year return.



Sources: NASDAQ, S&P, MSCI, Russell.

## Trade Weighted U.S. Dollar

Continued accommodative monetary and fiscal policy in the U.S. weighed on the U.S. dollar, which finished 2020 at levels last seen in mid-2018.

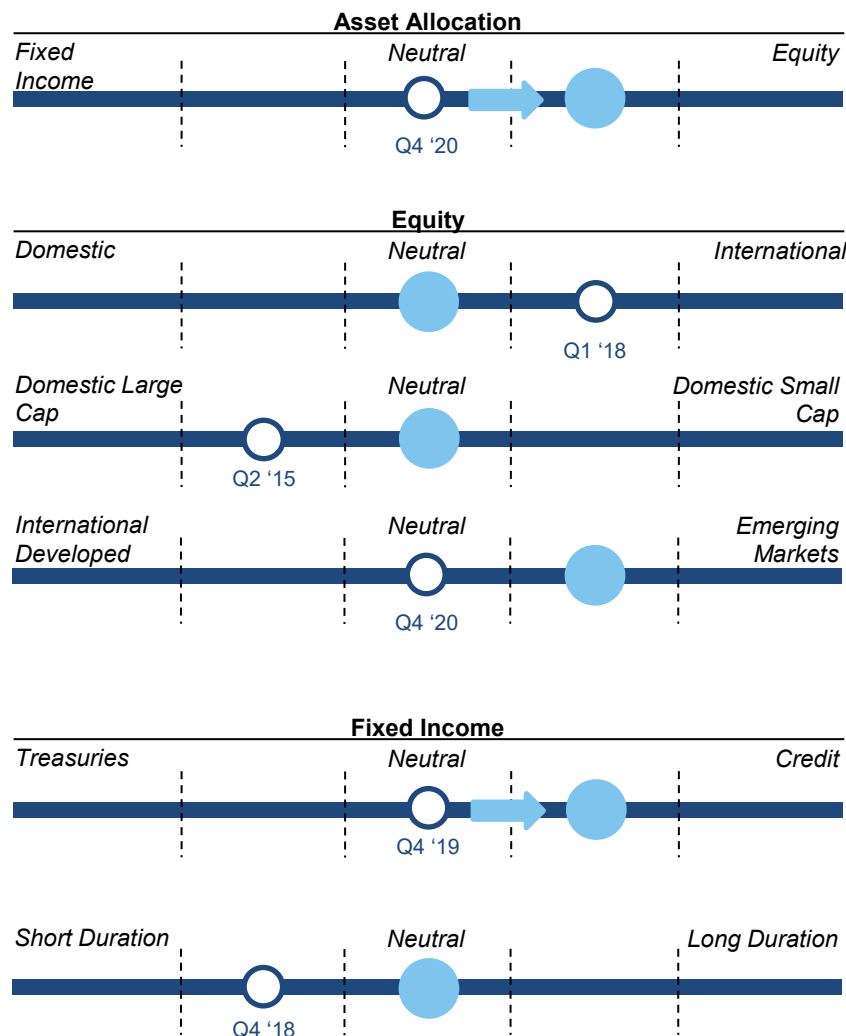


Source: Federal Reserve based on H.10 exchange rate data.



# INVESTING VIEWPOINTS

- Current Stance
- Previous Stance (date indicates when we last changed our stance)



## Rationale

Given the Federal Open Market Committee's reduction in the Federal Funds rate to zero in response to COVID-induced lockdowns, equities are more attractive in the U.S. as a result. However, a successful vaccination effort is required to continue to support risk assets from here.

A historical analysis suggests U.S. dollar weakness is a key indicator for international outperformance relative to U.S. equities. While the environment can point to a higher likelihood of U.S. dollar weakness, which would add to the returns of international equities for U.S. investors, new and existing COVID-induced lockdowns might take their toll on international equities for some period.

Small cap equities had a volatile ride in 2020 but ended with positive momentum and are primed for an attractive environment if economic growth is higher than normal next year. However, any U.S. dollar weakness may benefit U.S. large caps with global operations more so than more domestically-focused small caps.

Emerging markets remains the most attractive forward looking return assumption in our view. It's not without more volatility and risk compared to other equity asset classes as we've seen at various periods, but in a return-seeking portfolio, emerging markets should be emphasized in our view.

In a low return world, U.S. corporate credit remains relatively more attractive than sovereign bonds. However, caution is warranted since corporate credit spreads have narrowed quickly after rapidly widening in March of last year. With an acceleration of defaults expected in high yield, as well as low spreads after the asset class has significantly recovered, forward looking returns offer some upside to sovereign bonds.

Assuming a pickup in U.S. inflation as a result of Congress being successful in passing additional spending measures, one would expect a steepening yield curve, which would negatively impact longer duration. Short duration fixed income is also unattractive since shorter-dated bonds are trading at yields that would result in negative real returns, which is also a challenge for investors.

## Asset Allocation - City of Torrington Pension Plans

As of December 31, 2020

Investment		Employees Pension Plan		Police & Fire Pension Plan		Target Ranges (%)
		Market Value (\$)	Allocation (%)	Market Value (\$)	Allocation (%)	
<u>Asset Class</u>						
Money Market	Wells Fargo Advantage Money Market	\$56,712	0.1%	33,106	0.0%	0.0%
<u>Fixed Income</u>						
Core	Vanguard Total Bond Mkt	3,460,805	7.4%	5,571,578	7.4%	8.0%
Core Plus	Met West Total Return PI	7,873,301	16.9%	12,652,434	16.9%	18.0%
	Bank of America Fixed Income	155	0.0%	-	0.0%	0.0%
Bank Loan	Eaton Vance Senior Floating Rate	2,503,892	5.4%	4,053,328	5.4%	5.5%
Global Bond	Templeton Global Bond R6	2,378,625	5.1%	3,853,354	5.1%	5.5%
	<b>Total Fixed Income</b>	<b>16,216,777</b>	<b>34.7%</b>	<b>26,130,694</b>	<b>34.9%</b>	<b>27.5 - 42.5%</b>
<u>Domestic Equity</u>						
Large Blend	Vanguard Institutional Index Fund	6,300,086	13.5%	10,000,920	13.4%	13.0%
Large Value	MFS Value Fund R6	5,286,640	11.3%	8,403,671	11.2%	11.0%
Large Growth	MainStay Lg Growth	4,795,683	10.3%	7,765,713	10.4%	10.0%
Small Blend	Boston Trust Small Cap Fund	2,485,140	5.3%	3,955,788	5.3%	5.0%
	<b>Total Domestic Equity</b>	<b>18,867,548</b>	<b>40.4%</b>	<b>30,126,091</b>	<b>40.3%</b>	<b>32.5 - 52.5%</b>
<u>International Equity</u>						
Int'l Large Value	Dodge & Cox International	4,001,172	8.6%	6,304,440	8.4%	8.0%
Int'l Large Growth	Artisan International	3,735,388	8.0%	6,071,661	8.1%	8.0%
Int'l Mid Growth	Vanguard International Explorer Inv	1,478,007	3.2%	2,362,351	3.2%	3.0%
	<b>Total International Equity</b>	<b>9,214,567</b>	<b>19.7%</b>	<b>14,738,452</b>	<b>19.7%</b>	<b>12.5 - 22.5%</b>
<u>Inflation Protection</u>						
Real Assets	Principal Diversified Real Asset R6	2,368,377	5.1%	3,800,809	5.1%	5.0%
	<b>Total Inflation Protection</b>	<b>2,368,377</b>	<b>5.1%</b>	<b>3,800,809</b>	<b>5.1%</b>	<b>0.0 - 10.0%</b>
<b>Total Plan Assets</b>		<b>46,723,982</b>	<b>100.0%</b>	<b>74,829,152</b>	<b>100.0%</b>	

## City of Torrington Pension Plans

### Total Performance Summary & Manager Status Summary

As of December 31, 2020

#### Total Performance Summary

	QTR	YTD	1-Yr	3-Year	5-Year	Since 10/01/2008
Employees Pension Plan	9.5%	11.2%	11.2%	8.3%	9.4%	7.9%
Police & Fire Pension Plan	9.5%	11.2%	11.2%	8.3%	9.3%	8.0%
Blended Benchmark*	9.7%	13.7%	13.7%	9.5%	10.2%	8.5%

\*Blended Benchmark: 37% Barclays Aggregate / 39.0% Russell 3000 / 19.0% MSCI AC World ex US / 5% Principal Diversified Real Asset Strategic Index

#### Manager Status Summary

Mandate	Manager/Fund	Status	Note
Fixed Income	Vanguard Total Bond Market Index	Maintain	N/A
Fixed Income	MetWest Total Return PI	Maintain	N/A
Fixed Income	Bank of America Fixed Income	Liquidation in process	Account holds residual positions from terminated Bank of America separate account. Account value is less than \$200.
Fixed Income	Eaton Vance Floating Rate Bond R6	Maintain	N/A
Fixed Income	Templeton Global Bond R6	Maintain	N/A
Equity - Large Cap	Vanguard Institutional Index	Maintain	N/A
Equity - Large Cap	MFS Value R6	Maintain	N/A
Equity - Large Cap	MainStay Large Cap Growth I	Maintain	N/A
Equity - Sm/Mid Cap	Boston Trust Small Cap	Maintain	N/A
International Equity	Dodge & Cox International Stock	Maintain	N/A
International Equity	Artisan International I	Maintain	N/A
International Equity	Vanguard International Explorer Inv	Terminate	The fund was placed on terminate during the quarter following multiple changes to the fund's sub-advisors.
Real Assets	Principal Diversified Real Assets R6	Maintain	N/A

# Manager Performance Overview

As of December 31, 2020

	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
<u>Short Term Liquidity</u>								
<b>Wells Fargo Advantage Money Market</b>	<b>0.0</b>	<b>0.3</b>	<b>1.4</b>	<b>1.0</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>10/01/2008</b>
<i>90 Day U.S. Treasury Bill</i>	<i>0.0</i>	<i>0.7</i>	<i>1.6</i>	<i>1.2</i>	<i>0.9</i>	<i>0.6</i>	<i>0.5</i>	
<u>Fixed Income</u>								
<b>Vanguard Total Bond Market Index Adm</b>	<b>0.7 (88)</b>	<b>7.7 (65)</b>	<b>5.4 (51)</b>	<b>4.5 (60)</b>	<b>4.1 (50)</b>	<b>3.8 (61)</b>	<b>4.5 (74)</b>	<b>10/01/2008</b>
<i>Blmbg. Barc. U.S. Aggregate Index</i>	<i>0.7</i>	<i>7.5</i>	<i>5.3</i>	<i>4.4</i>	<i>4.1</i>	<i>3.8</i>	<i>4.5</i>	
IM U.S. Broad Market Core Fixed Income (MF) Median	1.4	8.2	5.4	4.6	4.1	3.9	4.8	
<b>Metropolitan West Total Return Bond PI</b>	<b>1.3 (82)</b>	<b>9.2 (35)</b>	<b>6.1 (30)</b>	<b>4.8 (62)</b>	<b>N/A</b>	<b>N/A</b>	<b>4.0 (48)</b>	<b>12/01/2014</b>
<i>Blmbg. Barc. U.S. Aggregate Index</i>	<i>0.7</i>	<i>7.5</i>	<i>5.3</i>	<i>4.4</i>	<i>4.1</i>	<i>3.8</i>	<i>3.7</i>	
IM U.S. Broad Market Core+ Fixed Income (MF) Median	2.0	8.5	5.6	5.1	4.3	4.4	4.0	
<b>Eaton Vance Floating Rate R6</b>	<b>3.8 (36)</b>	<b>2.4 (23)</b>	<b>3.4 (24)</b>	<b>5.1 (13)</b>	<b>3.5 (16)</b>	<b>N/A</b>	<b>3.8 (22)</b>	<b>06/01/2011</b>
<i>S&amp;P/LSTA Leveraged Loan Index</i>	<i>3.8</i>	<i>3.1</i>	<i>4.0</i>	<i>5.2</i>	<i>3.8</i>	<i>4.3</i>	<i>4.2</i>	
IM U.S. Bank Loans (MF) Median	3.5	1.4	2.9	4.0	2.9	3.4	3.3	
<b>Templeton Global Bond R6</b>	<b>0.8 (91)</b>	<b>-4.1 (100)</b>	<b>-0.5 (100)</b>	<b>1.5 (100)</b>	<b>0.7 (100)</b>	<b>N/A</b>	<b>1.6 (92)</b>	<b>06/01/2011</b>
<i>FTSE World Government Bond Index</i>	<i>2.8</i>	<i>10.1</i>	<i>5.0</i>	<i>4.8</i>	<i>2.8</i>	<i>2.3</i>	<i>2.0</i>	
IM Global Fixed Income (MF) Median	3.6	8.1	4.8	4.8	3.3	3.2	2.9	
<u>Domestic Equity</u>								
<b>Vanguard Institutional Index</b>	<b>12.1 (48)</b>	<b>18.4 (40)</b>	<b>14.2 (30)</b>	<b>15.2 (20)</b>	<b>12.9 (17)</b>	<b>13.9 (15)</b>	<b>12.3 (20)</b>	<b>10/01/2008</b>
<i>S&amp;P 500 Index</i>	<i>12.1</i>	<i>18.4</i>	<i>14.2</i>	<i>15.2</i>	<i>12.9</i>	<i>13.9</i>	<i>12.4</i>	
IM U.S. Large Cap Core Equity (MF) Median	12.0	16.0	12.4	13.6	11.4	12.4	11.2	
<b>MFS Value Fund R6</b>	<b>12.6 (84)</b>	<b>4.0 (35)</b>	<b>6.9 (29)</b>	<b>10.5 (22)</b>	<b>8.9 (18)</b>	<b>N/A</b>	<b>12.2 (15)</b>	<b>07/01/2012</b>
<i>Russell 1000 Value Index</i>	<i>16.3</i>	<i>2.8</i>	<i>6.1</i>	<i>9.7</i>	<i>8.2</i>	<i>10.5</i>	<i>11.3</i>	
IM U.S. Large Cap Value Equity (MF) Median	15.8	2.6	5.8	9.3	7.6	9.7	10.7	
<b>Mainstay Large Cap Growth Instl</b>	<b>9.4 (78)</b>	<b>37.4 (43)</b>	<b>24.0 (25)</b>	<b>19.8 (35)</b>	<b>16.4 (39)</b>	<b>N/A</b>	<b>15.8 (40)</b>	<b>03/01/2011</b>
<i>Russell 1000 Growth Index</i>	<i>11.4</i>	<i>38.5</i>	<i>23.0</i>	<i>21.0</i>	<i>17.5</i>	<i>17.2</i>	<i>16.8</i>	
IM U.S. Large Cap Growth Equity (MF) Median	11.1	36.2	22.1	19.0	16.0	15.7	15.4	
<b>Boston Trust Walden Small Cap</b>	<b>26.1 (75)</b>	<b>8.2 (61)</b>	<b>9.7 (18)</b>	<b>12.8 (17)</b>	<b>8.3 (34)</b>	<b>9.9 (40)</b>	<b>11.8 (41)</b>	<b>02/01/2010</b>
<i>Russell 2000 Index</i>	<i>31.4</i>	<i>20.0</i>	<i>10.2</i>	<i>13.3</i>	<i>9.3</i>	<i>11.2</i>	<i>13.0</i>	
IM U.S. Small Cap Core Equity (MF) Median	28.4	10.4	6.3	10.3	7.3	9.5	11.3	

Returns for periods less than one year are not annualized. Returns are net of fees unless otherwise noted.

# Manager Performance Overview

As of December 31, 2020

	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
International Equity								
<b>Dodge &amp; Cox International Stock Fund</b>	<b>24.7 (1)</b>	<b>2.1 (53)</b>	<b>0.9 (22)</b>	<b>6.6 (1)</b>	<b>2.9 (1)</b>	<b>4.6 (1)</b>	<b>5.6 (1)</b>	<b>10/01/2008</b>
<i>MSCI AC World ex USA Value (net)</i>	20.4	-0.8	-0.4	5.7	1.7	2.8	3.9	
IM International Large Cap Value Equity (MF) Median	19.7	2.5	0.0	3.9	1.2	3.1	3.1	
<b>Artisan International Instl</b>	<b>8.9 (96)</b>	<b>7.8 (92)</b>	<b>7.6 (62)</b>	<b>8.1 (81)</b>	<b>5.0 (72)</b>	<b>7.4 (32)</b>	<b>7.3 (43)</b>	<b>10/01/2008</b>
<i>MSCI AC World ex USA Growth (Net)</i>	13.9	22.2	10.0	12.0	7.8	6.9	7.4	
IM International Large Cap Growth Equity (MF) Median	14.7	16.7	8.4	10.1	6.3	6.6	7.2	
<b>Vanguard International Explorer Inv</b>	<b>18.8 (55)</b>	<b>15.1 (19)</b>	<b>2.6 (45)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.4 (38)</b>	<b>03/01/2016</b>
<i>MSCI EAFE Small Cap (net) Index</i>	17.3	12.3	4.9	9.4	7.2	7.8	11.6	
IM International SMID Cap Core Equity (MF) Median	19.5	9.0	1.8	8.0	5.3	6.0	10.0	
Inflation Protection								
<b>Principal Diversified Real Asset R6</b>	<b>10.8 (34)</b>	<b>3.9 (72)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>6.7 (60)</b>	<b>12/01/2019</b>
<i>Diversified Real Asset Blended Index</i>	10.7	2.1	2.8	6.2	2.6	2.4	4.7	
IM Flexible Portfolio (MF) Median	9.2	6.9	5.2	6.9	5.4	6.0	8.1	

The inception date expressed on the Manager Performance Overview page(s) represents the first day of the first full month following the purchase of the investment. Performance figures shown at the fund level begin on this inception date. Inception dates for asset class composites reflect the start date at which these returns could be calculated using historical and existing system capabilities and may vary from the inception dates of underlying component strategies. Composite performance includes all funds held in the composite since inception.

Returns are net of fees unless otherwise stated. Mutual fund performance stated above may differ slightly from the current share class's historical performance due to share class exchanges.

# Manager Performance Overview

As of December 31, 2020

	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
<b>Torrington Employee Plan</b>	<b>9.5</b>	<b>11.2</b>	<b>8.3</b>	<b>9.4</b>	<b>7.1</b>	<b>7.8</b>	<b>7.9</b>	<b>10/01/2008</b>
<i>Torrington Benchmark</i>	<i>9.7</i>	<i>13.7</i>	<i>9.5</i>	<i>10.2</i>	<i>8.2</i>	<i>8.6</i>	<i>8.5</i>	
<i>Torrington Benchmark (Secondary)</i>	<i>9.9</i>	<i>12.6</i>	<i>8.6</i>	<i>9.5</i>	<i>7.4</i>	<i>7.8</i>	<i>7.9</i>	
<b>Torrington Police &amp; Fire Plan</b>	<b>9.5</b>	<b>11.2</b>	<b>8.3</b>	<b>9.3</b>	<b>7.1</b>	<b>7.8</b>	<b>8.0</b>	<b>10/01/2008</b>
<i>Torrington Police &amp; Fire Blended Benchmark</i>	<i>9.7</i>	<i>13.7</i>	<i>9.5</i>	<i>10.2</i>	<i>8.2</i>	<i>8.6</i>	<i>8.5</i>	
<i>Torrington Police &amp; Fire Blended Benchmark (Secondary)</i>	<i>9.9</i>	<i>12.6</i>	<i>8.6</i>	<i>9.5</i>	<i>7.4</i>	<i>7.8</i>	<i>7.9</i>	
<b>Fixed Income - Police &amp; Fire</b>	<b>1.5</b>	<b>5.9</b>	<b>4.6</b>	<b>4.4</b>	<b>3.6</b>	<b>3.8</b>	<b>4.9</b>	<b>03/01/2009</b>
<b>Fixed Income - Employees</b>	<b>1.5</b>	<b>6.0</b>	<b>4.7</b>	<b>4.4</b>	<b>3.6</b>	<b>3.8</b>	<b>4.9</b>	<b>03/01/2009</b>
<i>Blmbg. Barc. U.S. Aggregate Index</i>	<i>0.7</i>	<i>7.5</i>	<i>5.3</i>	<i>4.4</i>	<i>4.1</i>	<i>3.8</i>	<i>4.4</i>	
<b>Domestic Equity - Police &amp; Fire</b>	<b>13.3</b>	<b>17.6</b>	<b>14.1</b>	<b>14.8</b>	<b>12.2</b>	<b>13.0</b>	<b>16.5</b>	<b>03/01/2009</b>
<b>Domestic Equity - Employees</b>	<b>13.3</b>	<b>17.6</b>	<b>14.1</b>	<b>14.8</b>	<b>12.1</b>	<b>13.0</b>	<b>16.4</b>	<b>03/01/2009</b>
<i>Russell 3000 Index</i>	<i>14.7</i>	<i>20.9</i>	<i>14.5</i>	<i>15.4</i>	<i>12.8</i>	<i>13.8</i>	<i>17.4</i>	
<b>International Equity - Police &amp; Fire</b>	<b>17.1</b>	<b>6.9</b>	<b>4.2</b>	<b>7.7</b>	<b>4.3</b>	<b>6.1</b>	<b>11.5</b>	<b>03/01/2009</b>
<b>International Equity - Employees</b>	<b>17.2</b>	<b>7.0</b>	<b>4.3</b>	<b>7.7</b>	<b>4.3</b>	<b>6.2</b>	<b>11.5</b>	<b>03/01/2009</b>
<i>MSCI AC World ex USA (Net)</i>	<i>17.0</i>	<i>10.7</i>	<i>4.9</i>	<i>8.9</i>	<i>4.8</i>	<i>4.9</i>	<i>10.0</i>	
<b>Inflation Protection - Police &amp; Fire</b>	<b>10.8</b>	<b>3.9</b>	<b>-1.8</b>	<b>2.3</b>	<b>-3.1</b>	<b>N/A</b>	<b>-2.9</b>	<b>06/01/2011</b>
<b>Inflation Protection - Employees</b>	<b>10.8</b>	<b>3.9</b>	<b>-1.6</b>	<b>2.3</b>	<b>-3.0</b>	<b>N/A</b>	<b>-2.9</b>	<b>06/01/2011</b>
<i>Short Term Inflation Protection Index</i>	<i>10.2</i>	<i>-4.1</i>	<i>-1.8</i>	<i>2.0</i>	<i>-2.5</i>	<i>N/A</i>	<i>-2.6</i>	

The inception date expressed on the Manager Performance Overview page(s) represents the first day of the first full month following the purchase of the investment. Performance figures shown at the fund level begin on this inception date. Inception dates for asset class composites reflect the start date at which these returns could be calculated using historical and existing system capabilities and may vary from the inception dates of underlying component strategies. Composite performance includes all funds held in the composite since inception.

Returns are net of fees unless otherwise stated. Mutual fund performance stated above may differ slightly from the current share class's historical performance due to share class exchanges.

Returns for periods less than one year are not annualized. Returns are net of fees unless otherwise noted.



## Manager Commentary

As of December 31, 2020

Manager	Manager Status	Comments
<b>Fixed Income</b>		
Vanguard Total Bond Market Index Instl (VBTIX)	Maintain	In accordance with its objective, the Vanguard Total Bond Market Index Fund sufficiently tracked its index during the quarter.
Metropolitan West Total Return Bond PI (MWT SX)	Maintain	<p>4Q 2020 – The fixed income strategy produced a positive return during the fourth quarter and outperformed the Bloomberg Barclays U.S. Aggregate Bond Index. Fixed income markets produced a positive return for the period driven primarily by spread sectors. The yield of the 10-year U.S. Treasury moved higher during the period, ending the year at 0.93%. The team at MetWest continues to have a cautious view on the market. As such, the team continued to trim the corporate exposure during the quarter, taking profits on the back of tightening credit spreads. The portfolio remains underweight corporate credit duration and maintains a modest allocation to high yield. The portfolio is underweight duration as rates remain near all-time lows.</p> <p>(+) Issue selection had the largest positive impact on relative results in the period, with favorable performance within corporates and securitized.</p> <p>(+) An underweight to government bonds contributed to returns.</p> <p>(+) A lower duration profile relative to the benchmark was beneficial in the rising interest rate environment.</p> <p>(-) An underweight allocation to corporate bonds detracted from relative results.</p>
Eaton Vance Floating Rate R6 (ESBLX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Templeton Global Bond R6 (FBNRX)	Maintain	<p>4Q 2020 - Templeton Global Bond produced a positive return during the quarter but underperformed its benchmark. The investment grade fixed income market produced a positive return in the fourth quarter. Interest rates moved generally higher and U.S. corporate credit spreads tightened in the risk-on environment.</p> <p>(-) The strategy's higher quality allocations detracted from relative returns as risk assets continued to rally during the quarter</p> <p>(-) Underweight Eurozone duration detracted from returns</p>
<b>Domestic Equity</b>		
Vanguard Institutional Index (VINIX)	Maintain	In accordance with its objective, the Vanguard Institutional Index Fund sufficiently tracked its index during the quarter.
MFS Value Fund R6 (MEIKX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Mainstay Large Cap Growth Instl (MLAIX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Boston Trust Walden Small Cap (BOSOX)	Maintain	4Q 2020 - Commentary not available at time of report production.

## Manager Commentary

As of December 31, 2020

Manager	Manager Status	Comments
<b>International Equity</b>		
Dodge & Cox International Stock Fund (DODFX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Artisan International Instl (APHIX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Vanguard International Explorer Inv (VINEX)	Terminate 3Q 2020	4Q 2020 - Commentary not available at time of report production.
<b>Inflation Protection</b>		
Principal Diversified Real Asset R6 (PDARX)	Maintain	4Q 2020 - Commentary not available at time of report production.

## Estimated Fee Analysis

As of December 31, 2020

Manager	Current Target %	Fee Schedule
Vanguard Total Bond Market Index Adm	8.0%	0.05%
Metropolitan West Total Return Bond PI	18.0%	0.38%
Eaton Vance Floating Rate R6	5.5%	0.72%
Templeton Global Bond R6	5.5%	0.56%
Vanguard Institutional Index	13.0%	0.04%
MFS Value Fund R6	11.0%	0.47%
Mainstay Large Cap Growth Instl	10.0%	0.74%
Boston Trust Walden Small Cap	5.0%	1.00%
Dodge & Cox International Stock Fund	8.0%	0.63%
Artisan International Instl	8.0%	0.97%
Vanguard International Explorer Inv	3.0%	0.41%
Principal Diversified Real Asset R6	5.0%	0.78%
<b>Weighted Average Investment Management Fee</b>		<b>0.50%</b>

DISCLOSURE: The figures on this page have been obtained from sources we deem to be reliable, including Morningstar. DiMeo Schneider & Associates has not independently verified this information.

## Asset Allocation - Employees Pension

As of December 31, 2020

	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)	Differences (%)
<b>Total Plan</b>	<b>46,723,982</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>
<b>Short Term Liquidity</b>	<b>56,712</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>
Wells Fargo Advantage Money Market	56,712	0.1	0.0	0.1
<b>Fixed Income</b>	<b>16,216,777</b>	<b>34.7</b>	<b>37.0</b>	<b>-2.3</b>
Vanguard Total Bond Market Index Adm	3,460,805	7.4	8.0	-0.6
Metropolitan West Total Return Bond Pl	7,873,301	16.9	18.0	-1.1
Bank of America Fixed Income	155	0.0	0.0	0.0
Eaton Vance Floating Rate R6	2,503,892	5.4	5.5	-0.1
Templeton Global Bond R6	2,378,625	5.1	5.5	-0.4
<b>Domestic Equity</b>	<b>18,867,548</b>	<b>40.4</b>	<b>39.0</b>	<b>1.4</b>
Vanguard Institutional Index	6,300,086	13.5	13.0	0.5
MFS Value Fund R6	5,286,640	11.3	11.0	0.3
Mainstay Large Cap Growth Instl	4,795,683	10.3	10.0	0.3
Boston Trust Walden Small Cap	2,485,140	5.3	5.0	0.3
<b>International Equity</b>	<b>9,214,567</b>	<b>19.7</b>	<b>19.0</b>	<b>0.7</b>
Dodge & Cox International Stock Fund	4,001,172	8.6	8.0	0.6
Artisan International Instl	3,735,388	8.0	8.0	0.0
Vanguard International Explorer Inv	1,478,007	3.2	3.0	0.2
<b>Inflation Protection</b>	<b>2,368,377</b>	<b>5.1</b>	<b>5.0</b>	<b>0.1</b>
Principal Diversified Real Asset R6	2,368,377	5.1	5.0	0.1

Investments with a zero balance were held in the portfolio during the reporting period and will be removed once they no longer impact portfolio performance.  
Asset Allocation weightings may not add up to 100% due to rounding.

## Total Portfolio Performance Summary

Employee Pension

As of December 31, 2020

### Account Reconciliation

	QTR	YTD	Since Inception	Inception Date
<b>Total Plan</b>				<b>10/01/2008</b>
Beginning Market Value	43,297,340	43,832,708	22,570,251	
Net Contributions	-651,950	-1,802,439	-8,010,587	
Total Gain/Loss	4,078,592	4,693,712	32,164,317	
Ending Market Value	46,723,982	46,723,982	46,723,982	

### Torrington Benchmark Composition

Allocation Mandate	Weight (%)
<b>Dec-2019</b>	
Blmbg. Barc. U.S. Aggregate Index	37.00
Russell 3000 Index	39.00
MSCI AC World ex USA (Net)	19.00
Principal Diversified Real Asset Strategic Index	5.00

### Trailing Performance Summary

	QTR	Jul-2020 To Dec-2020	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
<b>Total Plan</b>	<b>9.5</b>	<b>14.6</b>	<b>11.2</b>	<b>8.3</b>	<b>9.4</b>	<b>7.1</b>	<b>7.8</b>	<b>7.9</b>	<b>10/01/2008</b>
<i>Torrington Benchmark</i>	<i>9.7</i>	<i>15.4</i>	<i>13.7</i>	<i>9.5</i>	<i>10.2</i>	<i>8.2</i>	<i>8.6</i>	<i>8.5</i>	
Difference	-0.2	-0.8	-2.5	-1.2	-0.8	-1.1	-0.8	-0.6	

### Calendar Year Performance Summary

	2019	2018	2017	2016	2015	2014	2013	2012
<b>Total Plan</b>	<b>20.1</b>	<b>-4.8</b>	<b>15.9</b>	<b>6.2</b>	<b>-1.4</b>	<b>4.9</b>	<b>16.6</b>	<b>14.2</b>
<i>Torrington Benchmark</i>	<i>21.1</i>	<i>-4.8</i>	<i>15.2</i>	<i>7.5</i>	<i>-0.4</i>	<i>7.4</i>	<i>15.6</i>	<i>12.9</i>
Difference	-1.0	0.0	0.7	-1.3	-1.0	-2.5	1.0	1.3

## Manager Investment Gain/Loss Summary - Employees Pension

Quarter Ending December 31, 2020

	Market Value As of 10/01/2020	Net Flows	Return On Investment	Market Value As of 12/31/2020
<u>Short Term Liquidity</u>				
Wells Fargo Advantage Money Market	58,651	-1,942	2	56,712
<b>Total Short Term Liquidity</b>	<b>58,651</b>	<b>-1,942</b>	<b>2</b>	<b>56,712</b>
<u>Fixed Income</u>				
Vanguard Total Bond Market Index Adm	3,437,818	-	22,987	3,460,805
Metropolitan West Total Return Bond Pl	7,773,938	-	99,363	7,873,301
Bank of America Fixed Income	161	-9	3	155
Eaton Vance Floating Rate R6	2,411,964	-	91,928	2,503,892
Templeton Global Bond R6	2,360,012	-	18,613	2,378,625
<b>Total Fixed Income</b>	<b>15,983,893</b>	<b>-9</b>	<b>232,893</b>	<b>16,216,777</b>
<u>Domestic Equity</u>				
Vanguard Institutional Index	5,687,026	-75,000	688,060	6,300,086
MFS Value Fund R6	4,830,725	-150,000	605,915	5,286,640
Mainstay Large Cap Growth Instl	4,384,878	-	410,805	4,795,683
Boston Trust Walden Small Cap	2,096,062	-150,000	539,077	2,485,140
<b>Total Domestic Equity</b>	<b>16,998,691</b>	<b>-375,000</b>	<b>2,243,857</b>	<b>18,867,548</b>
<u>International Equity</u>				
Dodge & Cox International Stock Fund	3,354,021	-175,000	822,151	4,001,172
Artisan International Instl	3,429,370	-	306,018	3,735,388
Vanguard International Explorer Inv	1,335,019	-100,000	242,989	1,478,007
<b>Total International Equity</b>	<b>8,118,410</b>	<b>-275,000</b>	<b>1,371,157</b>	<b>9,214,567</b>
<u>Inflation Protection</u>				
Principal Diversified Real Asset R6	2,137,695	-	230,683	2,368,377
<b>Total Inflation Protection</b>	<b>2,137,695</b>	<b>-</b>	<b>230,683</b>	<b>2,368,377</b>
<b>Total Plan</b>	<b>43,297,340</b>	<b>-651,950</b>	<b>4,078,592</b>	<b>46,723,982</b>

## Market Value & Flow Summary - Employees Pension

Since Inception Ending December 31, 2020

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Sep-2008	-	-	-	22,570,251	N/A
Dec-2008	22,570,251	8,527	-3,012,529	19,566,249	-13.3
Mar-2009	19,566,249	1,021	-1,250,184	18,317,086	-6.5
Jun-2009	18,317,086	-2,601	2,346,974	20,661,458	12.8
Sep-2009	20,661,458	499,855	2,626,182	23,787,495	12.6
Dec-2009	23,787,495	-1,594	804,909	24,590,810	3.4
Mar-2010	24,590,810	-4,145	874,772	25,461,437	3.6
Jun-2010	25,461,437	-1,778	-1,600,716	23,858,944	-6.3
Sep-2010	23,858,944	-1,248	2,228,850	26,086,545	9.3
Dec-2010	26,086,545	-584	1,543,564	27,629,525	5.9
Mar-2011	27,629,525	-1,782	864,697	28,492,441	3.1
Jun-2011	28,492,441	-2,152	302,575	28,792,864	1.1
Sep-2011	28,792,864	-2,058	-3,398,663	25,392,142	-11.8
Dec-2011	25,392,142	-1,958	1,670,861	27,061,046	6.6
Mar-2012	27,061,046	-2,103	2,489,993	29,548,935	9.2
Jun-2012	29,548,935	-2,018	-698,619	28,848,297	-2.4
Sep-2012	28,848,297	786	1,524,964	30,374,047	5.3
Dec-2012	30,374,047	-2,190	531,660	30,903,517	1.8
Mar-2013	30,903,517	-2,202	1,647,444	32,548,759	5.3
Jun-2013	32,548,759	-1,007	-98,266	32,449,487	-0.3
Sep-2013	32,449,487	-902,135	1,656,237	33,203,589	5.2
Dec-2013	33,203,589	-1,493	1,867,654	35,069,750	5.6
Mar-2014	35,069,750	-1,311	279,260	35,347,699	0.8
Jun-2014	35,347,699	-1,251,462	1,230,609	35,326,846	3.6
Sep-2014	35,326,846	-1,818	-523,302	34,801,726	-1.5
Dec-2014	34,801,726	1,911	682,656	35,486,293	2.0
Mar-2015	35,486,293	348,549	733,326	36,568,168	2.0
Jun-2015	36,568,168	-301,558	-182,086	36,084,524	-0.5
Sep-2015	36,084,524	498,460	-2,221,816	34,361,169	-6.1
Dec-2015	34,361,169	-1,528	1,161,391	35,521,032	3.4
Mar-2016	35,521,032	-1,001,519	202,510	34,722,024	0.7

## Market Value & Flow Summary - Employees Pension

Since Inception Ending December 31, 2020

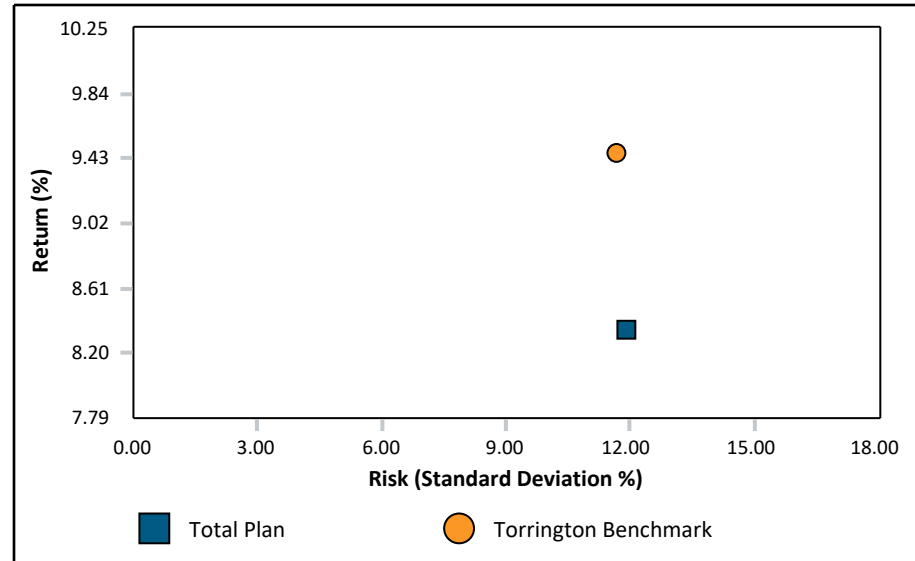
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Jun-2016	34,722,024	-101,539	616,511	35,236,996	1.8
Sep-2016	35,236,996	-1,518	1,146,426	36,381,903	3.3
Dec-2016	36,381,903	-1,551	128,108	36,508,460	0.4
Mar-2017	36,508,460	-1,544	1,746,399	38,253,315	4.8
Jun-2017	38,253,315	-1,001,621	1,242,839	38,494,533	3.3
Sep-2017	38,494,533	-1,639	1,312,982	39,805,877	3.4
Dec-2017	39,805,877	-1,698	1,404,351	41,208,530	3.5
Mar-2018	41,208,530	-851,742	-73,078	40,283,711	-0.2
Jun-2018	40,283,711	-1,857	407,320	40,689,173	1.0
Sep-2018	40,689,173	-1,712	1,221,910	41,909,371	3.0
Dec-2018	41,909,371	-601,758	-3,463,326	37,844,287	-8.3
Mar-2019	37,844,287	-1,685	3,526,896	41,369,497	9.3
Jun-2019	41,369,497	-1,301,563	1,416,812	41,484,747	3.5
Sep-2019	41,484,747	198,198	329,658	42,012,603	0.8
Dec-2019	42,012,603	-401,784	2,221,889	43,832,708	5.3
Mar-2020	43,832,708	-602,000	-6,075,667	37,155,042	-14.1
Jun-2020	37,155,042	-726,607	4,763,262	41,191,697	12.9
Sep-2020	41,191,697	178,118	1,927,525	43,297,340	4.7
Dec-2020	43,297,340	-651,950	4,078,592	46,723,982	9.5



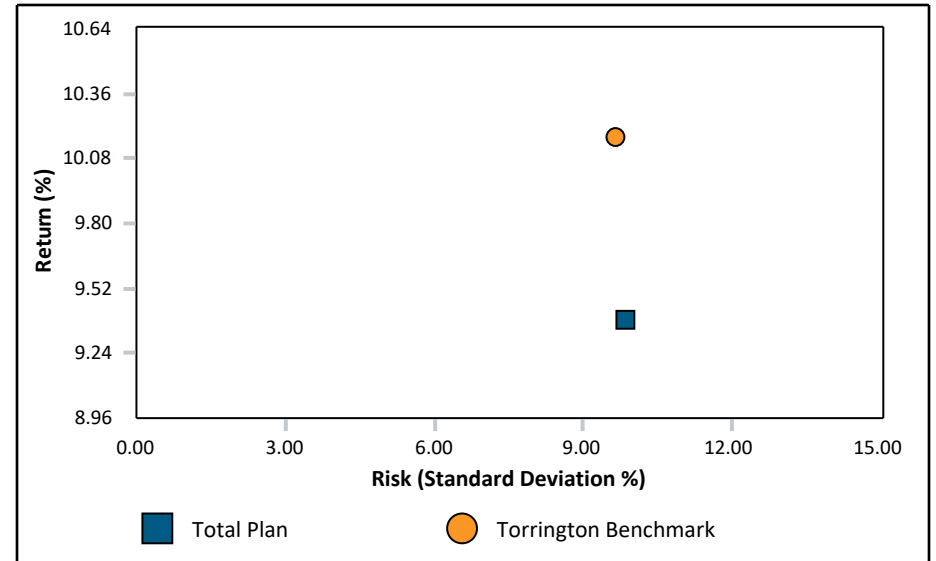
# Risk vs. Return - Employees Pension

As of December 31, 2020

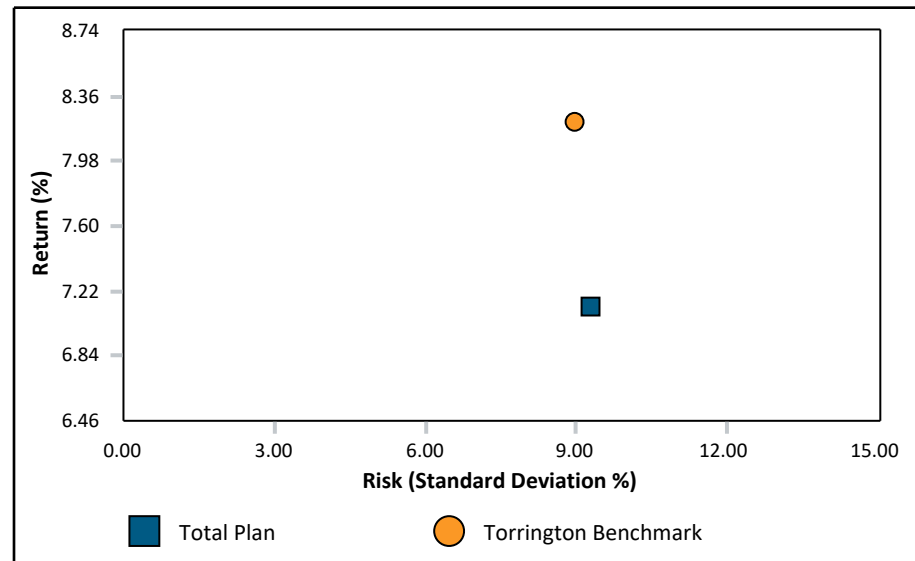
### 3 Year Risk and Return



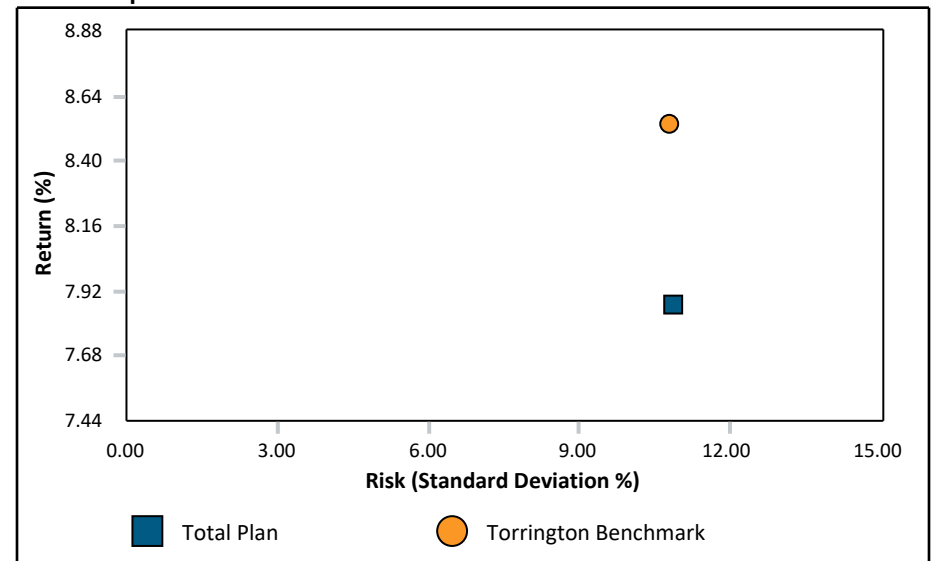
### 5 Year Risk and Return



### 7 Year Risk and Return



### Since Inception Risk and Return



# MPT Statistical Data - Employees Pension

As of December 31, 2020

## 3 Year Historical MPT Statistics

	Return	Standard Deviation	Downside Risk	Sharpe Ratio	Information Ratio	Tracking Error	R-Squared	Beta	Alpha
Total Plan	8.34	11.95	7.96	0.59	-0.80	1.24	0.99	1.02	-1.14
Torrington Benchmark	9.46	11.70	7.52	0.69	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	1.61	0.27	0.00	N/A	-0.69	11.82	0.18	-0.01	1.70

## 5 Year Historical MPT Statistics

	Return	Standard Deviation	Downside Risk	Sharpe Ratio	Information Ratio	Tracking Error	R-Squared	Beta	Alpha
Total Plan	9.38	9.87	6.43	0.83	-0.62	1.13	0.99	1.02	-0.86
Torrington Benchmark	10.17	9.65	6.06	0.93	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	1.18	0.27	0.01	N/A	-0.93	9.73	0.08	-0.01	1.27

## 7 Year Historical MPT Statistics

	Return	Standard Deviation	Downside Risk	Sharpe Ratio	Information Ratio	Tracking Error	R-Squared	Beta	Alpha
Total Plan	7.13	9.31	6.01	0.69	-0.85	1.15	0.99	1.03	-1.19
Torrington Benchmark	8.21	9.00	5.60	0.82	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	0.85	0.27	0.01	N/A	-0.82	9.06	0.03	-0.01	0.90

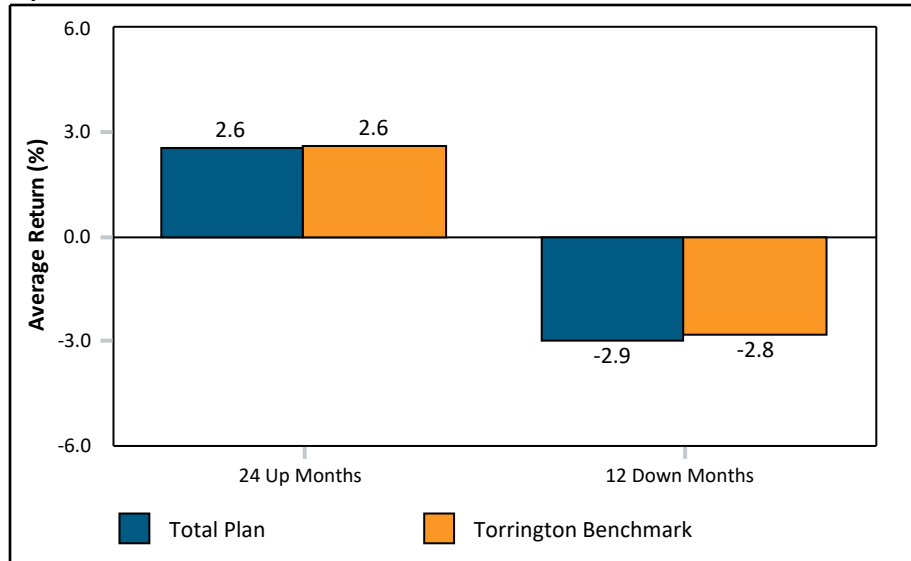
## Since Inception Historical MPT Statistics

	Return	Standard Deviation	Downside Risk	Sharpe Ratio	Information Ratio	Tracking Error	R-Squared	Beta	Alpha	Inception Date
Total Plan	7.87	10.88	7.30	0.70	-0.46	1.33	0.99	1.00	-0.61	10/01/2008
Torrington Benchmark	8.53	10.81	7.17	0.76	N/A	0.00	1.00	1.00	0.00	10/01/2008
90 Day U.S. Treasury Bill	0.55	0.24	0.01	N/A	-0.76	10.85	0.03	0.00	0.58	10/01/2008

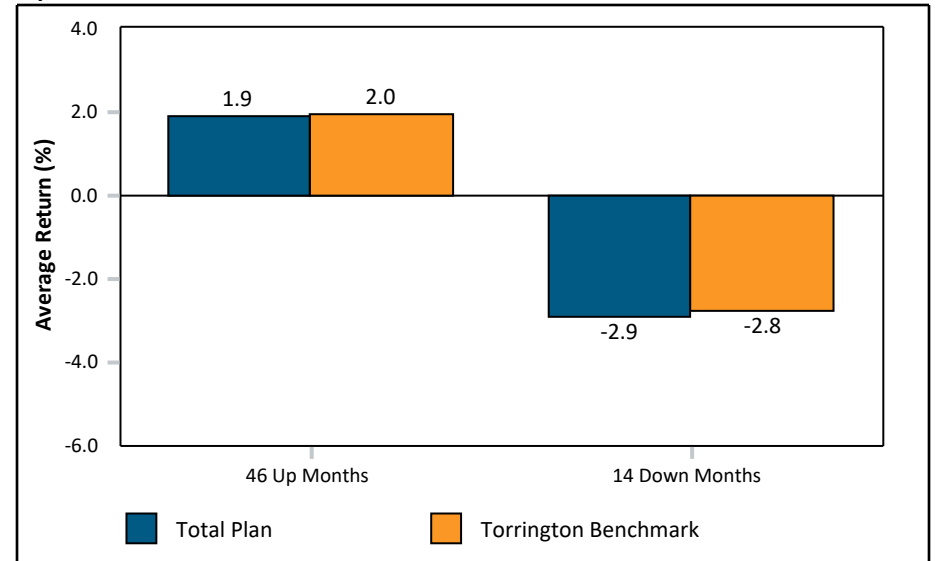
# Market Capture Report - Employees Pension

As of December 31, 2020

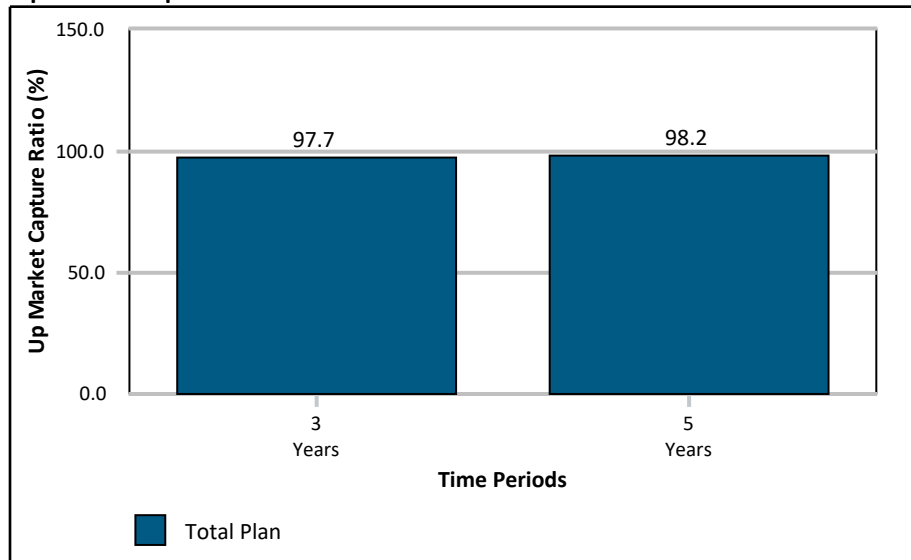
### Up/Down Markets - 3 Years



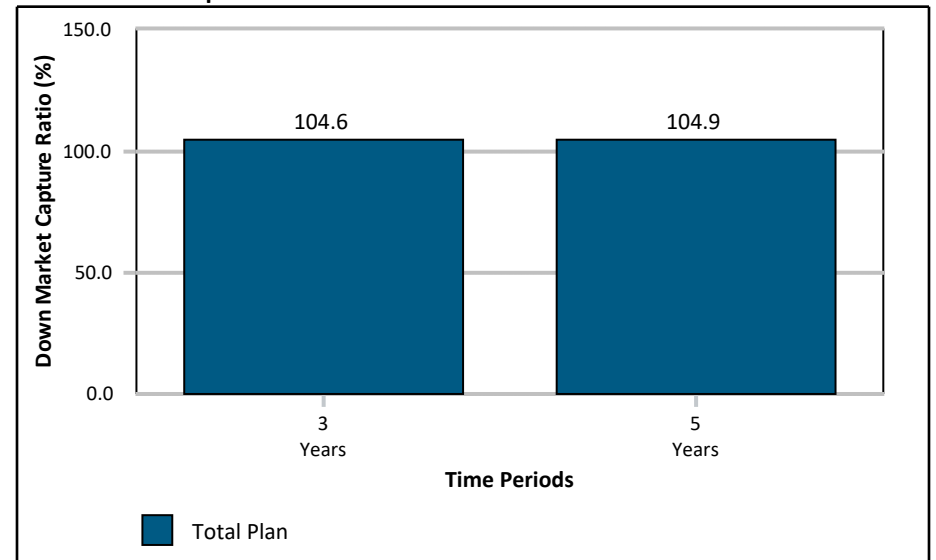
### Up/Down Markets - 5 Years



### Up Market Capture Ratio



### Down Market Capture Ratio



## Asset Allocation - Police & Fire Pension

As of December 31, 2020

	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)	Differences (%)
<b>Total Plan</b>	<b>74,829,152</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>
<b>Short Term Liquidity</b>	<b>33,106</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Wells Fargo Advantage Money Market	33,106	0.0	0.0	0.0
<b>Fixed Income</b>	<b>26,130,694</b>	<b>34.9</b>	<b>37.0</b>	<b>-2.1</b>
Vanguard Total Bond Market Index Instl	5,571,578	7.4	8.0	-0.6
Metropolitan West Total Return Bond Pl	12,652,434	16.9	18.0	-1.1
Eaton Vance Floating Rate R6	4,053,328	5.4	5.5	-0.1
Templeton Global Bond R6	3,853,354	5.1	5.5	-0.4
<b>Domestic Equity</b>	<b>30,126,091</b>	<b>40.3</b>	<b>39.0</b>	<b>1.3</b>
Vanguard Institutional Index	10,000,920	13.4	13.0	0.4
MFS Value Fund R6	8,403,671	11.2	11.0	0.2
Mainstay Large Cap Growth Instl	7,765,713	10.4	10.0	0.4
Boston Trust Walden Small Cap	3,955,788	5.3	5.0	0.3
<b>International Equity</b>	<b>14,738,452</b>	<b>19.7</b>	<b>19.0</b>	<b>0.7</b>
Dodge & Cox International Stock Fund	6,304,440	8.4	8.0	0.4
Artisan International Instl	6,071,661	8.1	8.0	0.1
Vanguard International Explorer Inv	2,362,351	3.2	3.0	0.2
<b>Inflation Protection</b>	<b>3,800,809</b>	<b>5.1</b>	<b>5.0</b>	<b>0.1</b>
Principal Diversified Real Asset R6	3,800,809	5.1	5.0	0.1

Investments with a zero balance were held in the portfolio during the reporting period and will be removed once they no longer impact portfolio performance.  
Asset Allocation weightings may not add up to 100% due to rounding.

## Total Portfolio Performance Summary

Police & Fire Pension

As of December 31, 2020

### Account Reconciliation

	QTR	YTD	Since Inception	Inception Date
<b>Total Plan</b>				<b>10/01/2008</b>
Beginning Market Value	69,596,930	68,554,830	32,361,482	
Net Contributions	-1,302,926	-1,210,969	-5,748,303	
Total Gain/Loss	6,535,148	7,485,290	48,215,973	
Ending Market Value	74,829,152	74,829,152	74,829,152	

### Torrington Police & Fire Blended Benchmark

Allocation Mandate	Weight (%)
<b>Dec-2019</b>	
Blmbg. Barc. U.S. Aggregate Index	37.00
Russell 3000 Index	39.00
MSCI AC World ex USA (Net)	19.00
Principal Diversified Real Asset Strategic Index	5.00

### Trailing Performance Summary

	QTR	Jul-2020 To Dec-2020	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
<b>Total Plan</b>	<b>9.5</b>	<b>14.6</b>	<b>11.2</b>	<b>8.3</b>	<b>9.3</b>	<b>7.1</b>	<b>7.8</b>	<b>8.0</b>	<b>10/01/2008</b>
<i>Torrington Police &amp; Fire Blended Benchmark</i>	<i>9.7</i>	<i>15.4</i>	<i>13.7</i>	<i>9.5</i>	<i>10.2</i>	<i>8.2</i>	<i>8.6</i>	<i>8.5</i>	
Difference	-0.2	-0.8	-2.5	-1.2	-0.9	-1.1	-0.8	-0.5	

### Calendar Year Performance Summary

	2019	2018	2017	2016	2015	2014	2013	2012
<b>Total Plan</b>	<b>20.0</b>	<b>-4.9</b>	<b>15.7</b>	<b>6.2</b>	<b>-1.4</b>	<b>5.0</b>	<b>17.4</b>	<b>14.2</b>
<i>Torrington Police &amp; Fire Blended Benchmark</i>	<i>21.1</i>	<i>-4.8</i>	<i>15.2</i>	<i>7.5</i>	<i>-0.4</i>	<i>7.4</i>	<i>15.6</i>	<i>12.9</i>
Difference	-1.1	-0.1	0.5	-1.3	-1.0	-2.4	1.8	1.3

## Manager Investment Gain/Loss Summary - Police & Fire Pension

Quarter Ending December 31, 2020

	Market Value As of 10/01/2020	Net Flows	Return On Investment	Market Value As of 12/31/2020
<u>Short Term Liquidity</u>				
Wells Fargo Advantage Money Market	36,031	-2,926	1	33,106
<b>Total Short Term Liquidity</b>	<b>36,031</b>	<b>-2,926</b>	<b>1</b>	<b>33,106</b>
<u>Fixed Income</u>				
Vanguard Total Bond Market Index Instl	5,534,363	-	37,215	5,571,578
Metropolitan West Total Return Bond Pl	12,492,758	-	159,676	12,652,434
Eaton Vance Floating Rate R6	3,904,514	-	148,814	4,053,328
Templeton Global Bond R6	3,823,202	-	30,153	3,853,354
<b>Total Fixed Income</b>	<b>25,754,836</b>	<b>-</b>	<b>375,858</b>	<b>26,130,694</b>
<u>Domestic Equity</u>				
Vanguard Institutional Index	9,125,644	-225,000	1,100,276	10,000,920
MFS Value Fund R6	7,734,692	-300,000	968,979	8,403,671
Mainstay Large Cap Growth Instl	7,100,491	-	665,222	7,765,713
Boston Trust Walden Small Cap	3,366,765	-275,000	864,023	3,955,788
<b>Total Domestic Equity</b>	<b>27,327,593</b>	<b>-800,000</b>	<b>3,598,499</b>	<b>30,126,091</b>
<u>International Equity</u>				
Dodge & Cox International Stock Fund	5,325,608	-325,000	1,303,832	6,304,440
Artisan International Instl	5,574,247	-	497,414	6,071,661
Vanguard International Explorer Inv	2,124,874	-150,000	387,477	2,362,351
<b>Total International Equity</b>	<b>13,024,729</b>	<b>-475,000</b>	<b>2,188,723</b>	<b>14,738,452</b>
<u>Inflation Protection</u>				
Principal Diversified Real Asset R6	3,453,741	-25,000	372,068	3,800,809
<b>Total Inflation Protection</b>	<b>3,453,741</b>	<b>-25,000</b>	<b>372,068</b>	<b>3,800,809</b>
<b>Total Plan</b>	<b>69,596,930</b>	<b>-1,302,926</b>	<b>6,535,148</b>	<b>74,829,152</b>

## Market Value & Flow Summary - Police & Fire Pension

Since Inception Ending December 31, 2020

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Sep-2008	-	-	-	32,361,482	N/A
Dec-2008	32,361,482	11,754	-4,302,377	28,070,858	-13.3
Mar-2009	28,070,858	95,703	-1,781,918	26,384,643	-6.3
Jun-2009	26,384,643	-3,715	3,456,520	29,837,448	13.1
Sep-2009	29,837,448	4,778	3,817,679	33,659,905	12.8
Dec-2009	33,659,905	11,989	1,162,505	34,834,399	3.5
Mar-2010	34,834,399	-8,365	1,277,310	36,103,344	3.7
Jun-2010	36,103,344	-2,389	-2,316,719	33,784,236	-6.4
Sep-2010	33,784,236	-812	3,159,918	36,943,342	9.4
Dec-2010	36,943,342	-2,440	2,173,988	39,114,890	5.9
Mar-2011	39,114,890	19,895	1,222,906	40,357,691	3.1
Jun-2011	40,357,691	-2,914	431,717	40,786,494	1.1
Sep-2011	40,786,494	13,174	-4,788,673	36,010,995	-11.7
Dec-2011	36,010,995	-353	2,364,010	38,374,652	6.6
Mar-2012	38,374,652	-678	3,530,323	41,904,297	9.2
Jun-2012	41,904,297	-321	-982,820	40,921,155	-2.3
Sep-2012	40,921,155	11,798	2,162,686	43,095,639	5.3
Dec-2012	43,095,639	-490	742,311	43,837,461	1.7
Mar-2013	43,837,461	485	2,421,059	46,259,005	5.5
Jun-2013	46,259,005	1,090	-76,250	46,183,845	-0.2
Sep-2013	46,183,845	2,301,503	2,530,241	51,015,589	5.3
Dec-2013	51,015,589	4,108	2,977,375	53,997,071	5.8
Mar-2014	53,997,071	2,038	451,835	54,450,944	0.8
Jun-2014	54,450,944	-2,748,442	1,841,931	53,544,433	3.5
Sep-2014	53,544,433	4,660	-758,611	52,790,481	-1.4
Dec-2014	52,790,481	-4,425	1,065,199	53,851,255	2.0
Mar-2015	53,851,255	349,679	1,108,721	55,309,656	2.0
Jun-2015	55,309,656	-1,502,261	-263,939	53,543,456	-0.5
Sep-2015	53,543,456	2,497,806	-3,383,145	52,658,117	-6.0
Dec-2015	52,658,117	-2,056	1,774,110	54,430,171	3.4
Mar-2016	54,430,171	-2,502,227	246,441	52,174,385	0.8

## Market Value & Flow Summary - Police & Fire Pension

Since Inception Ending December 31, 2020

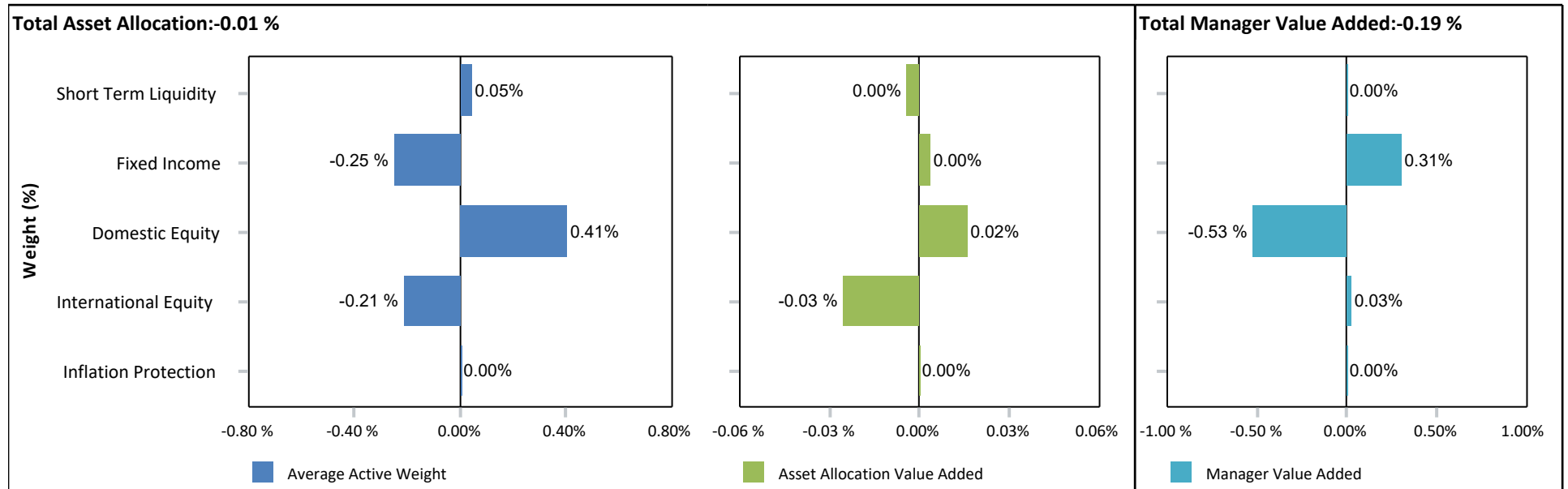
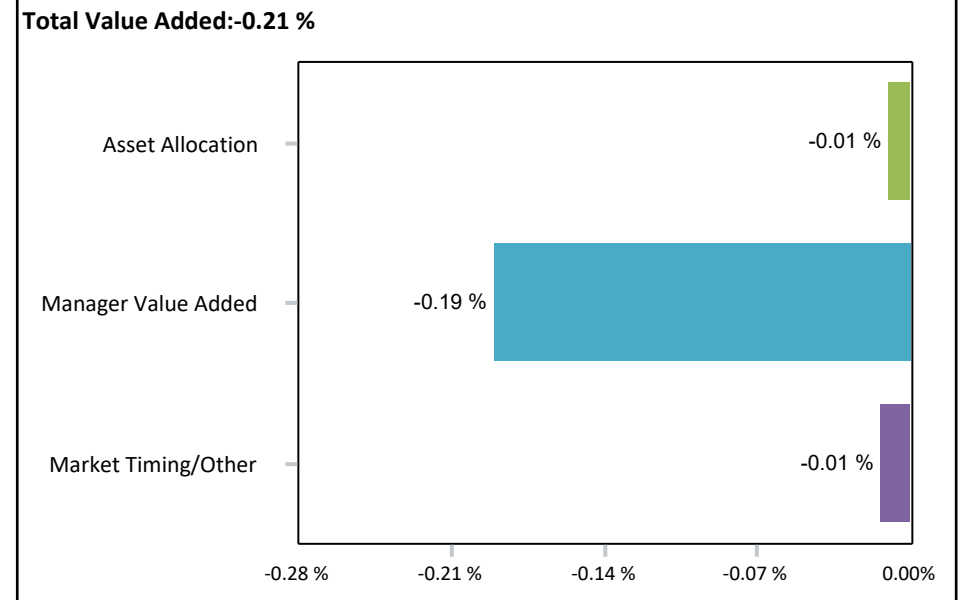
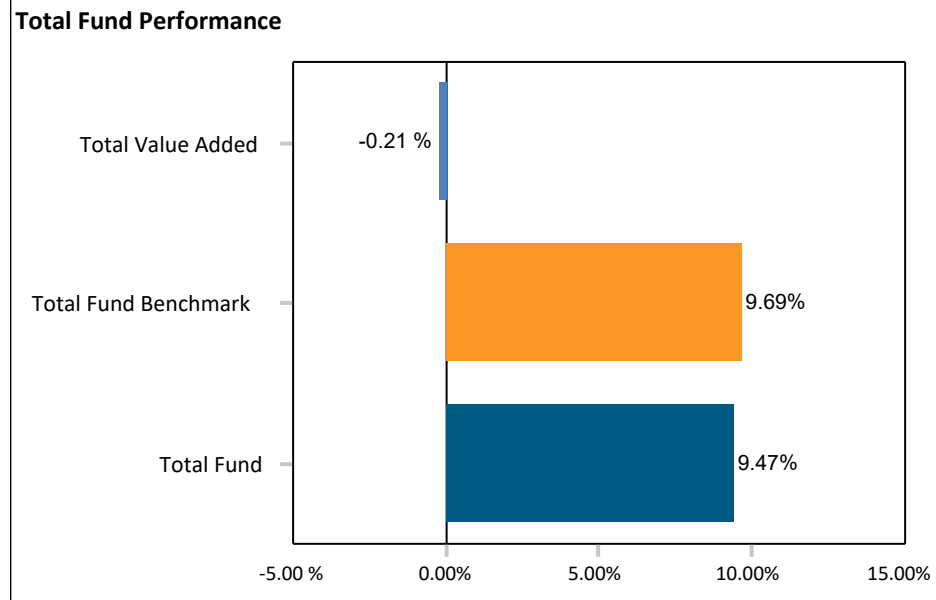
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Jun-2016	52,174,385	-1,302,213	898,872	51,771,045	1.7
Sep-2016	51,771,045	-2,061	1,696,251	53,465,235	3.3
Dec-2016	53,465,235	-2,201	153,596	53,616,629	0.3
Mar-2017	53,616,629	-2,197	2,555,633	56,170,066	4.8
Jun-2017	56,170,066	-1,352,293	1,812,502	56,630,275	3.3
Sep-2017	56,630,275	-1,828	1,922,942	58,551,389	3.4
Dec-2017	58,551,389	-2,402	2,009,378	60,558,366	3.4
Mar-2018	60,558,366	-2,467	-148,123	60,407,776	-0.2
Jun-2018	60,407,776	-2,621	608,800	61,013,955	1.0
Sep-2018	61,013,955	1,997,526	1,819,311	64,830,793	2.9
Dec-2018	64,830,793	-1,502,706	-5,339,820	57,988,267	-8.3
Mar-2019	57,988,267	-2,425	5,402,416	63,388,258	9.3
Jun-2019	63,388,258	-2,602,535	2,134,646	62,920,369	3.5
Sep-2019	62,920,369	2,997,365	462,142	66,379,876	0.7
Dec-2019	66,379,876	-1,302,846	3,477,801	68,554,830	5.3
Mar-2020	68,554,830	-1,303,006	-9,400,512	57,851,312	-14.0
Jun-2020	57,851,312	-1,402,277	7,363,000	63,812,034	12.8
Sep-2020	63,812,034	2,797,241	2,987,655	69,596,930	4.7
Dec-2020	69,596,930	-1,302,926	6,535,148	74,829,152	9.5



# Total Portfolio Attribution

## Total Plan vs. Police & Fire Attribution

1 Quarter Ending December 31, 2020

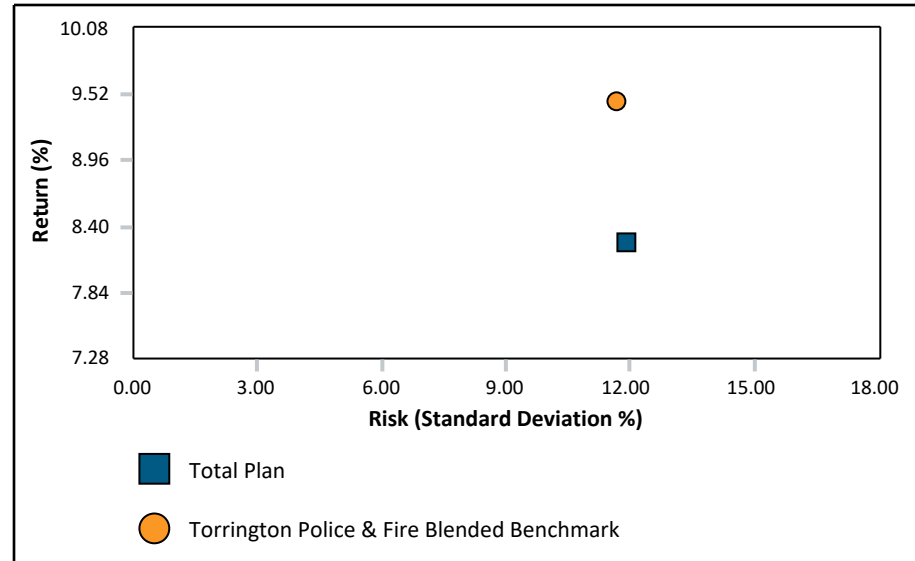


Returns are net of fees unless otherwise noted.

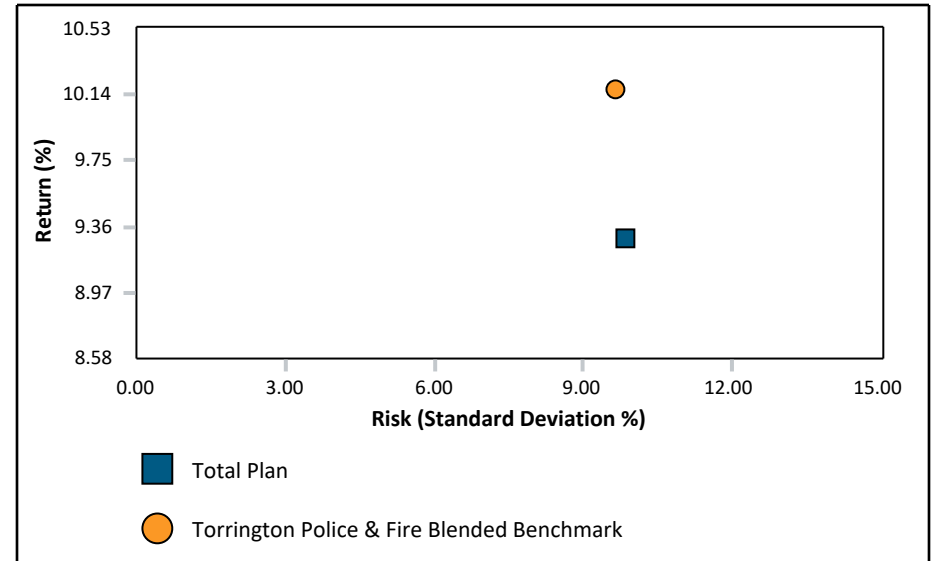
## Risk vs. Return - Police & Fire Pension

As of December 31, 2020

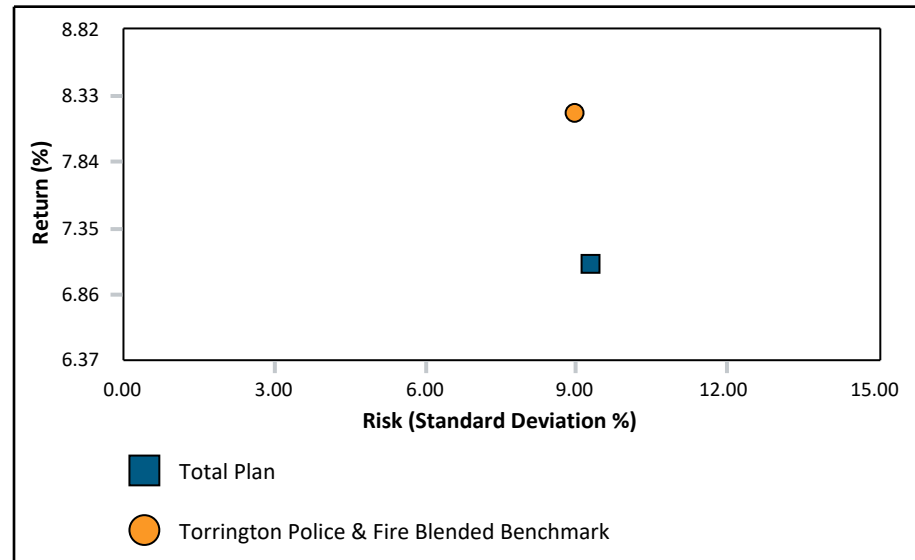
### 3 Year Risk and Return



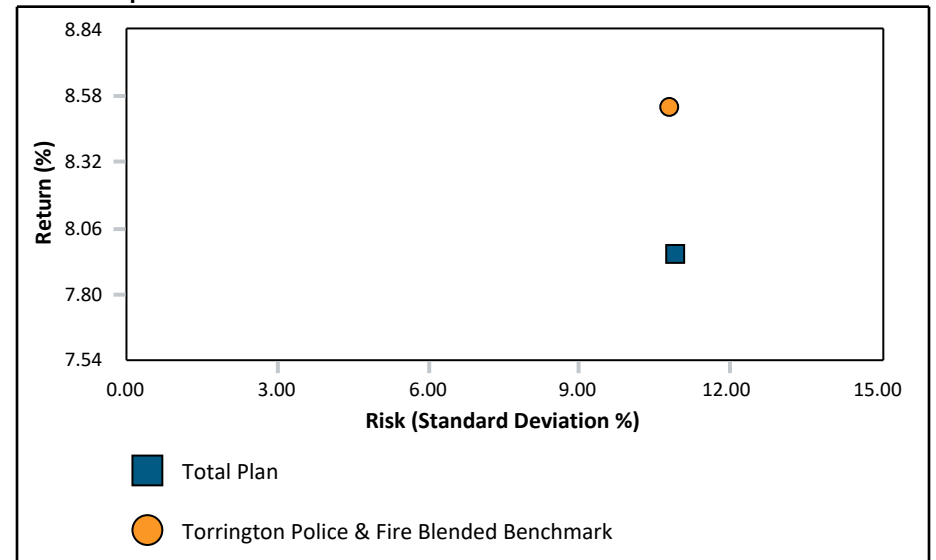
### 5 Year Risk and Return



### 7 Year Risk and Return



### Since Inception Risk and Return



# MPT Statistical Data - Police & Fire Pension

As of December 31, 2020

## 3 Year Historical MPT Statistics

	Return	Standard Deviation	Downside Risk	Sharpe Ratio	Information Ratio	Tracking Error	R-Squared	Beta	Alpha
Total Plan	8.25	11.92	7.94	0.59	-0.89	1.22	0.99	1.01	-1.21
Torrington Police & Fire Blended Benchmark	9.46	11.70	7.52	0.69	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	1.61	0.27	0.00	N/A	-0.69	11.82	0.18	-0.01	1.70

## 5 Year Historical MPT Statistics

	Return	Standard Deviation	Downside Risk	Sharpe Ratio	Information Ratio	Tracking Error	R-Squared	Beta	Alpha
Total Plan	9.28	9.85	6.41	0.83	-0.71	1.12	0.99	1.01	-0.93
Torrington Police & Fire Blended Benchmark	10.17	9.65	6.06	0.93	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	1.18	0.27	0.01	N/A	-0.93	9.73	0.08	-0.01	1.27

## 7 Year Historical MPT Statistics

	Return	Standard Deviation	Downside Risk	Sharpe Ratio	Information Ratio	Tracking Error	R-Squared	Beta	Alpha
Total Plan	7.08	9.30	6.00	0.69	-0.89	1.15	0.99	1.02	-1.22
Torrington Police & Fire Blended Benchmark	8.21	9.00	5.60	0.82	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	0.85	0.27	0.01	N/A	-0.82	9.06	0.03	-0.01	0.90

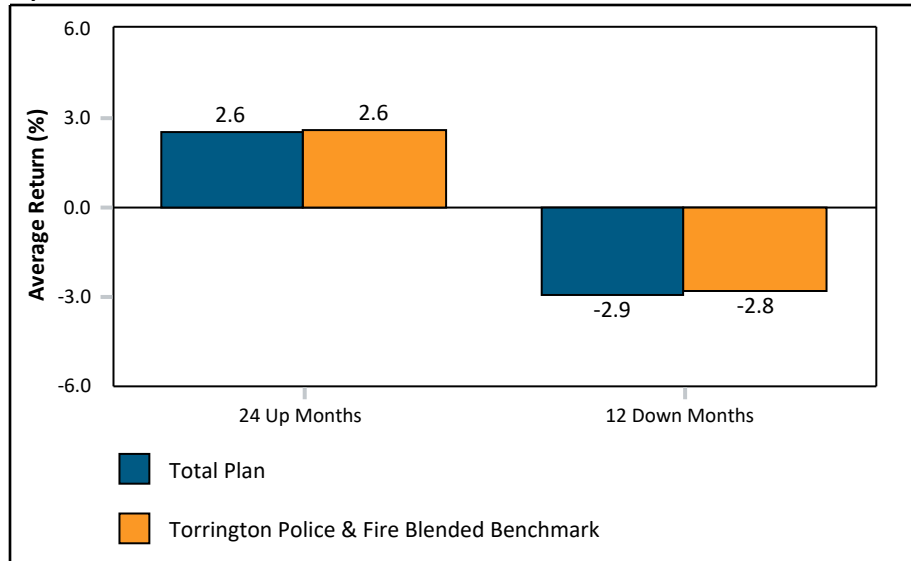
## Since Inception Historical MPT Statistics

	Return	Standard Deviation	Downside Risk	Sharpe Ratio	Information Ratio	Tracking Error	R-Squared	Beta	Alpha	Inception Date
Total Plan	7.96	10.93	7.32	0.70	-0.40	1.31	0.99	1.00	-0.56	10/01/2008
Torrington Police & Fire Blended Benchmark	8.53	10.81	7.17	0.76	N/A	0.00	1.00	1.00	0.00	10/01/2008
90 Day U.S. Treasury Bill	0.55	0.24	0.01	N/A	-0.76	10.85	0.03	0.00	0.58	10/01/2008

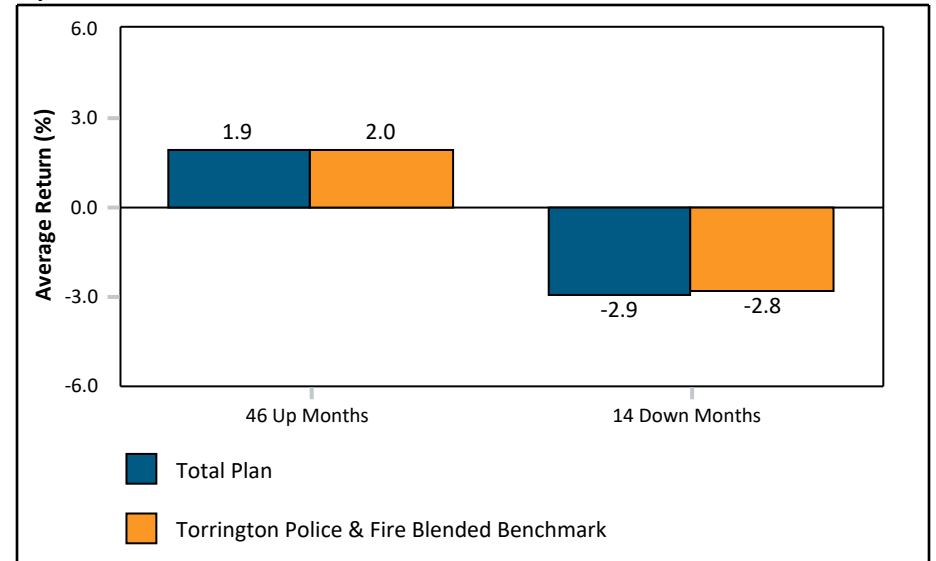
# Market Capture Report - Police & Fire Pension

As of December 31, 2020

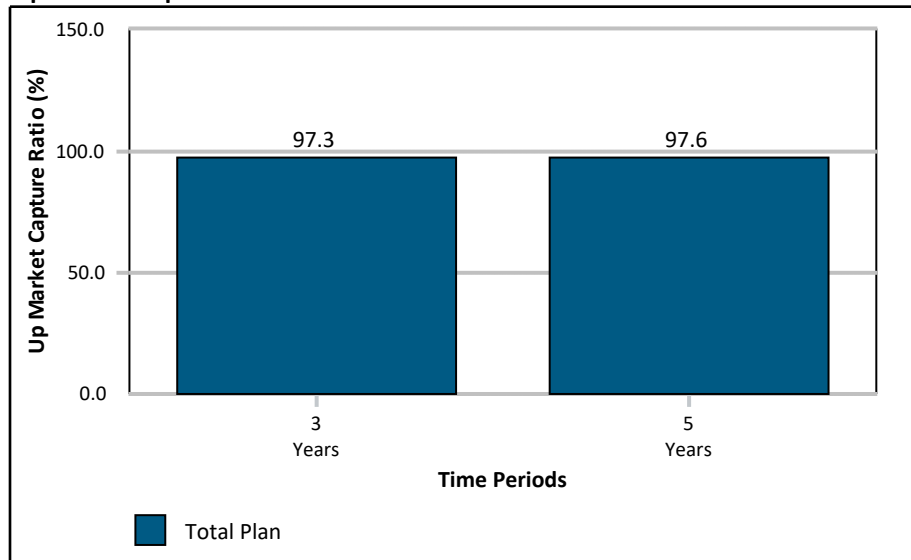
### Up/Down Markets - 3 Years



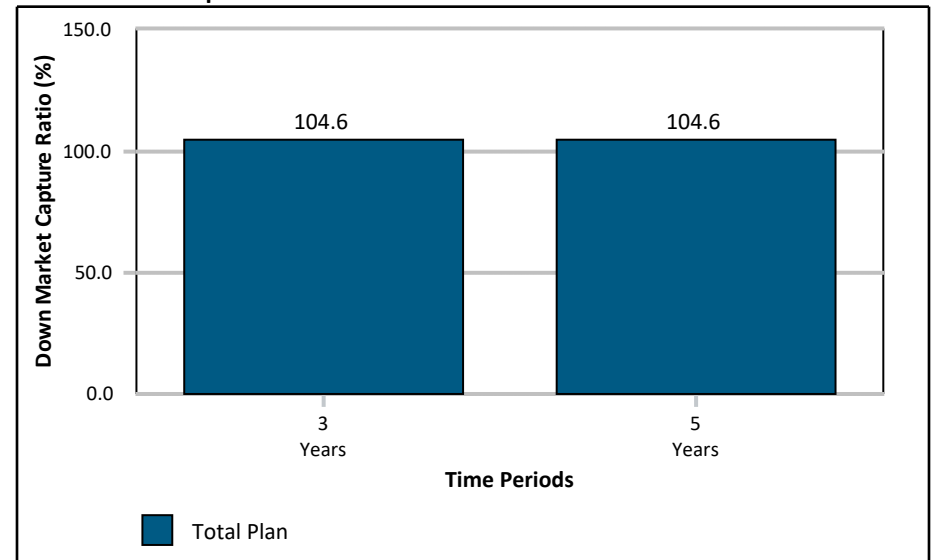
### Up/Down Markets - 5 Years



### Up Market Capture Ratio



### Down Market Capture Ratio



## Historical Hybrid Composition

As of December 31, 2020

Allocation Mandate	Weight (%)
Dec-2019	
Blmbg. Barc. U.S. Aggregate Index	37.0
Russell 3000 Index	39.0
MSCI AC World ex USA (Net)	19.0
Principal Diversified Real Asset Strategic Index	5.0
Oct-2009	
Blmbg. Barc. U.S. Aggregate Index	35.0
Russell 3000 Index	42.5
MSCI AC World ex USA (Net)	17.5
FTSE EPRA/NAREIT Developed Index (Net)	5.0
Oct-2008	
Blmbg. Barc. U.S. Aggregate Index	35.0
Russell 3000 Index	42.5
MSCI AC World ex USA (Net)	17.5
FTSE EPRA/NAREIT Developed Index (Net)	5.0

## Historical Hybrid Composition

Torrington Benchmark (Secondary)

As of December 31, 2020

Allocation Mandate	Weight (%)
Dec-2019	
Blmbg. Barc. U.S. Aggregate Index	35.0
Russell 3000 Index	37.5
MSCI AC World ex USA (Net)	17.5
FTSE EPRA/NAREIT Developed Index (Net)	5.0
Principal Diversified Real Asset Strategic Index	5.0
May-2011	
Blmbg. Barc. U.S. Aggregate Index	35.0
Russell 3000 Index	37.5
MSCI AC World ex USA (Net)	17.5
FTSE EPRA/NAREIT Developed Index (Net)	5.0
Short Term Inflation Protection Index	5.0
Oct-2009	
Blmbg. Barc. U.S. Aggregate Index	35.0
Russell 3000 Index	42.5
MSCI AC World ex USA (Net)	17.5
FTSE EPRA/NAREIT Developed Index (Net)	5.0
Oct-2008	
Blmbg. Barc. U.S. Aggregate Index	35.0
Russell 3000 Index	42.5
MSCI AC World ex USA (Net)	17.5
FTSE EPRA/NAREIT Developed Index (Net)	5.0

## Historical Hybrid Composition

Inflation Protection Benchmark

As of December 31, 2020

Allocation Mandate	Weight (%)
Dec-2019	
Principal Diversified Real Asset Strategic Index	100.0
Jun-2011	
Short Term Inflation Protection Index	100.0

## Prospectus Links

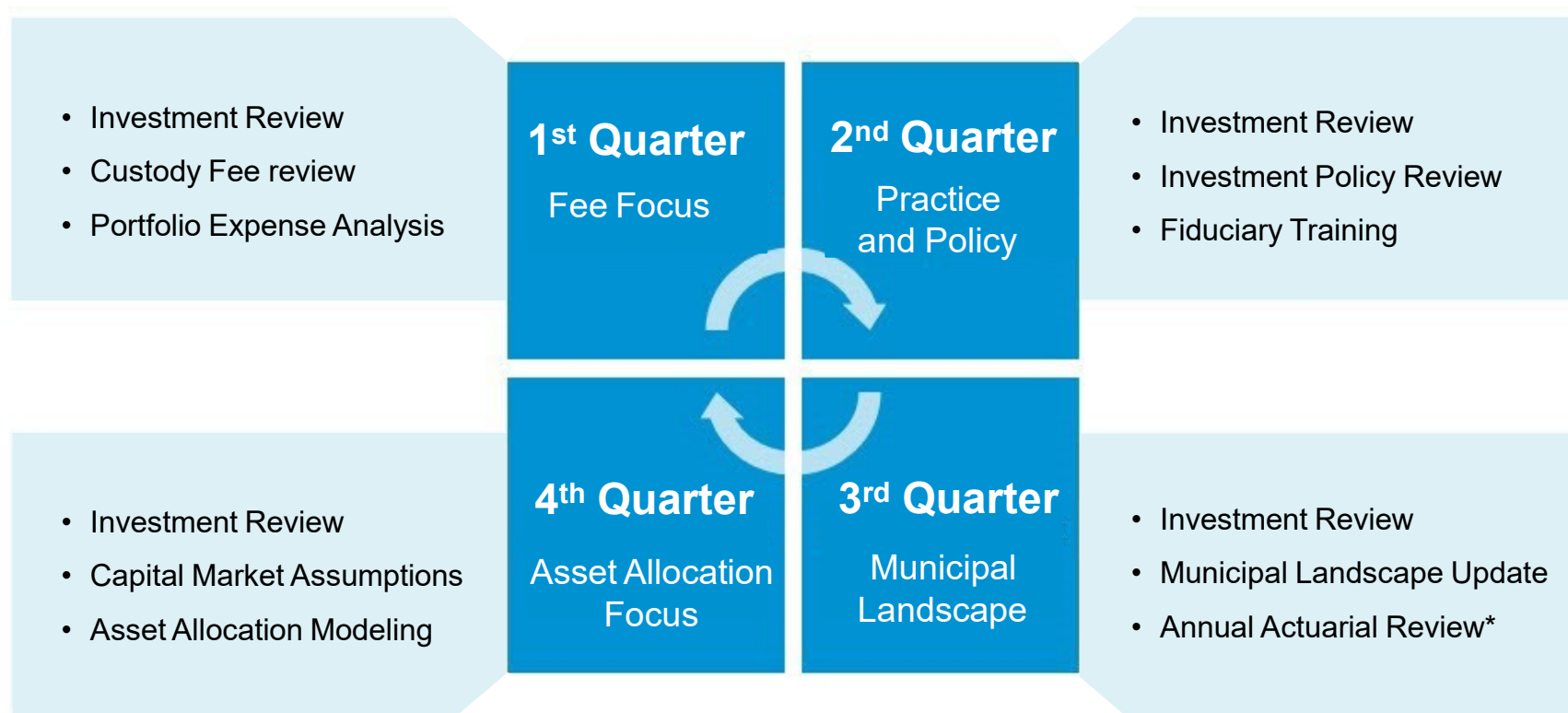
As of December 31, 2020

<b><u>FUND FAMILY</u></b>	<b><u>WEB SITE</u></b>
Artisan Funds	<a href="http://www.artisanfunds.com">www.artisanfunds.com</a>
Boston Trust	<a href="http://www.bostontrust.com">www.bostontrust.com</a>
Dodge & Cox	<a href="http://www.dodgeandcox.com">www.dodgeandcox.com</a>
Eaton Vance	<a href="http://www.eatonvance.com">www.eatonvance.com</a>
MainStay Funds	<a href="http://www.nylinvestments.com/mainstay">www.nylinvestments.com/mainstay</a>
Met West	<a href="http://www.mwamllc.com">www.mwamllc.com</a>
MFS	<a href="http://www.mfs.com">www.mfs.com</a>
Principal	<a href="http://www.principalfunds.com">www.principalfunds.com</a>
Templeton	<a href="http://www.franklintempleton.com">www.franklintempleton.com</a>
Vanguard	<a href="http://www.vanguard.com">www.vanguard.com</a>





# DEFINED BENEFIT FIDUCIARY GOVERNANCE CALENDAR



**FIDUCIARY TRAIL®**

\*Timing of actuarial review is dependent on client's individual plan and/or fiscal year and actuarial input.

# ACTUARIAL REVIEW

## City of Torrington Police & Fire Pension Plan



Hooker & Holcombe Actuarial Valuation Report June 30, 2019		
	6/30/19	6/30/18
Actuarial Value of Assets	\$62,989,305	\$60,148,364
Total Accrued Liability	\$100,248,318	\$98,259,752
Funded Ratio	62.83%	61.2%
Actuarial Return Assumption	7.0%	7.25%

Source: Hooker & Holcombe, 2019 Valuation Report

# ACTUARIAL REVIEW

## City of Torrington Employee Pension Plan



Hooker & Holcombe Actuarial Valuation Report June 30, 2019		
	6/30/19	6/30/18
Actuarial Value of Assets	\$41,607,860	\$40,372,588
Total Accrued Liability	\$50,424,464	\$49,161,237
Funded Ratio	82.52%	82.1%
Actuarial Return Assumption	7.0%	7.25%

Source: Hooker & Holcombe, 2019 Valuation Report



# ASSET ALLOCATION ANALYSIS

Asset Class	IPS Range	IPS Target	Current Allocation – EE	Current Allocation – P&F
Cash & Equivalents	0% - 5%	0%	0.1%	0.0%
Fixed Income	27.5% - 42.5%	37%	34.7%	34.9%
Domestic Equity	32.5% - 52.5%	39%	40.4%	40.3%
International Equity	12.5% - 22.5%	19%	19.7%	19.7%
Inflation Protection	0% - 10%	5%	5.1%	5.1%

The current allocation is within the allowable range as stated within the Investment Policy Statement (IPS). Any portfolio adjustments that are considered will likely remain within the allowable range.

# ASSET ALLOCATION ANALYSIS

- Our investment philosophy is based on the belief that **Asset Allocation** is the primary determinant of long-term investment results.
- We utilize our propriety tool, **Frontier Engineer®**, as the basis for our efficient frontier analysis and the cornerstone of asset allocation decisions.
- Our Capital Markets Group develops **Capital Market Assumptions** (CMAs) for each major asset class at least annually.
  - ✓ The Capital Markets Group considers and analyzes a wide variety of factors that we believe will have the greatest impact on future returns and risks for each asset class studied.
  - ✓ CMAs are not intended to predict the future return in any one year, but to reflect realistic expectations of potential future return and risk traits over a longer term.
  - ✓ Our forecasting efforts center on developing assumptions for a **10-year horizon**. Adjustments made to extend the forecast horizon to **20 years** are grounded in our expectation that asset classes ultimately mean revert to their respective long term historical averages.
  - ✓ DiMeo Schneider's Capital Markets Team develop our CMAs based on a "building block" approach outlined in our research paper *Capital Market Forecasts*.
- **Correlations** (how asset classes behave in reference to one another) also significantly impact asset allocation analysis.
- The industry trend has been to lower **investment return assumptions** based on lower capital market expectations. Given the current market environment, full market cycle (10-year) return assumptions are lower than long term (20-year) assumptions.



# JANUARY 2021 OUTLOOK

## Key Observations

- Expectations for 2021 fiscal stimulus and wide-scale vaccination efforts inform our generally constructive view for global equity markets in 2021. Monetary policy also remains ultra-accommodative and supportive of risk assets entering the new year.
- Potential obstacles in 2021 (particularly early in the year) include the sustainability of economic growth given continued COVID-19 challenges, elevated equity valuations, historically low interest rates and tighter credit spreads.

## Capital Market Factors

- **Economic Growth**: The IMF expects U.S. real GDP to contract 4.3 percent for calendar year 2020. Meaningful economic uncertainty remains for early 2021, but the IMF is forecasting 3.1 percent real GDP growth for 2021.
- **Monetary Policy**: The Fed's balance sheet expanded dramatically in 2020. Monetary policy remains ultra-accommodative and supportive of risk assets entering 2021. The Fed committed to continue buying bonds until the economy reaches full employment and inflation stays at 2 percent.
- **Fiscal Policy**: Congress passed significant stimulus measures early in 2020 and are finalizing additional measures for 2021. Broader based fiscal stimulus and economic relief measures are expected to be pursued early in the Biden administration.
- **Inflation**: Given ultra-accommodative monetary and fiscal policy, investors are beginning to price in *some* future inflation albeit still below the Fed's 2 percent target. A more accommodative Fed means there could be greater inflation risks for 2021 and beyond.
- **Currency**: Since hitting a high on March 19, 2020, the U.S. dollar has steadily declined by 12.7 percent relative a trade-weighted basket of global currencies. This has been a tailwind for U.S. investors holding non-U.S. dollar denominated assets. Given the Fed's more accommodative stance entering 2021, we believe there is more room for the U.S. dollar to decline.



# JANUARY 2021 – LONG TERM OUTLOOK

Asset Class	12/1/20 E(R) - 20 Year	12/1/19 E(R) - 20 Year	Year Over Year Change
Cash*	0.72%	2.23%	-1.5%
TIPS	1.7%	2.9%	-1.2%
Muni Bond**	1.6%	2.4%	-0.8%
Muni High Yield**	5.2%	5.0%	0.2%
US Bond	2.1%	3.3%	-1.1%
Dynamic Bonds***	2.8%		
Global Bonds	1.8%	3.0%	-1.2%
For. Dev. Bond	1.4%	2.5%	-1.1%
HY Bond	4.4%	5.5%	-1.1%
EM Bond	2.7%	3.9%	-1.2%
Global Equity	7.7%	8.1%	-0.4%
US Equity (AC)	6.4%	6.6%	-0.2%
US Equity (LC)	6.3%	6.5%	-0.2%
US Equity (MC)	6.6%	6.7%	-0.1%
US Equity (SC)	6.7%	6.7%	0.0%
Int'l Dev. Equity	7.9%	8.3%	-0.5%
EM Equity	9.4%	10.6%	-1.2%
Real Estate	6.2%	6.4%	-0.2%
Broad Real Assets****	4.8%		
Commod. Fut.	3.2%	4.2%	-1.0%
HFoF Multi-Strat	6.3%	7.2%	-0.9%
Private Equity	9.4%	9.6%	-0.2%

\*3-month forecast

\*\*Tax equivalent yield based on highest marginal tax rate (37%)

\*\*\*33% Cash, 33% Corp HY, and 34% Global Bonds

\*\*\*\*25% TIPS, 15% Bank Loans, 30% Infrastructure, 15% REITs and 15% Commodities

## Our Investment Themes

- Cash remains an expensive opportunity cost for investors.
- Given the reductions in forward looking returns for bonds across the globe, generating positive real returns will be challenging moving forward.
- Global stock market valuations rose in 2020 with prices expanding faster than earnings capacity.
- Real Assets remain an important diversifier as the events of 2020 have likely planted some seeds for rising future inflation.

## Understanding the Asset Allocation Analysis

- Pension liabilities are long term in nature. The plan's current Asset Allocation target using our 'Long Term', 20-year Capital Market Assumptions is provided on the following slide.
- Additionally, we provide alternative portfolio allocations that increase and decrease the fixed income and growth asset allocations within the pension.
- These scenarios are provided for discussion purposes and should be considered in conjunction with the liability.

For additional information on forecast methodologies, please speak with your advisor. Please see Index Proxy Summary slide at the end of this presentation for summary of indexes used to represent each asset class. Past performance does not indicate future performance and there is a possibility of a loss.

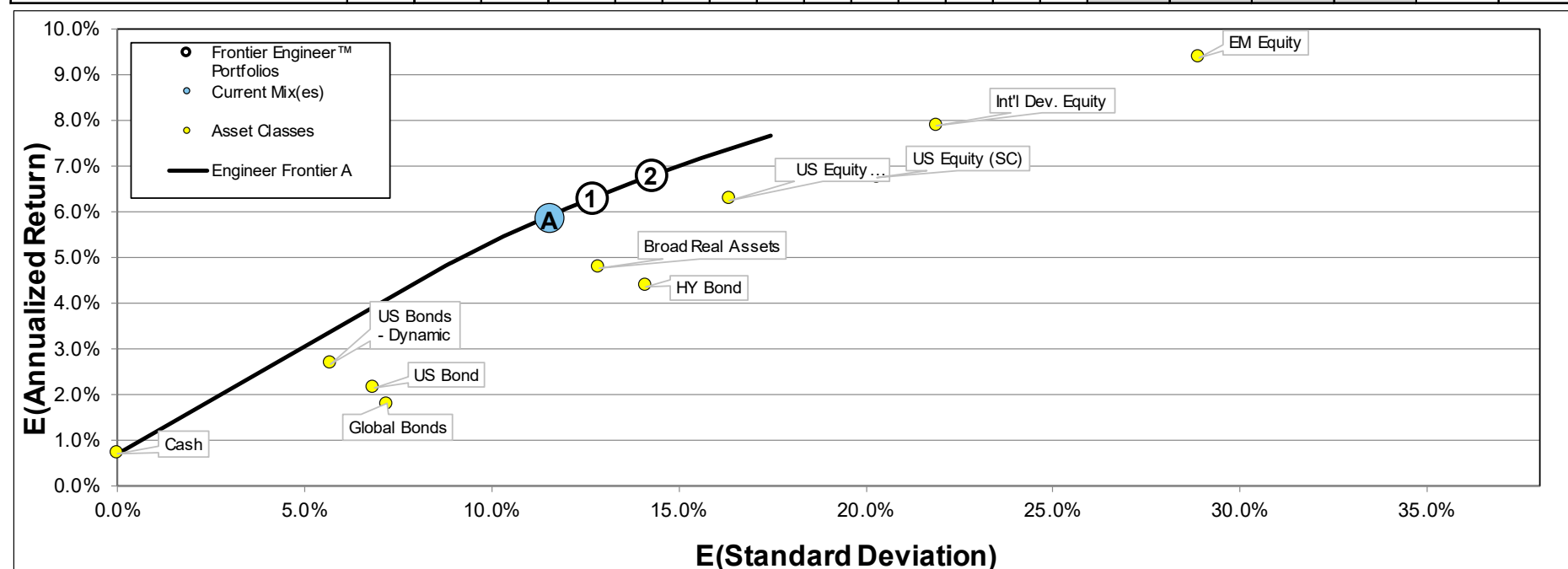


# FRONTIER ENGINEER® ANALYSIS

## 20 YEAR OUTLOOK

DiMEO SCHNEIDER  
& ASSOCIATES, L.L.C.

12/31/2020	Asset Allocation														Forecasts				Past (1/88-12/20)	
	Fixed Income	Equity	Real Assets	Alternatives	Cash	US Bond	US Bonds - Dynamic	HY Bond	Global Bonds	US Equity (LC)	US Equity (SC)	Int'l Dev. Equity	EM Equity	Broad Real Assets	Annualized Return	Annualized Volatility	Normal 100 Year Flood*	Non-Normal 100 Year Flood**	Annualized Return	Annualized Volatility
Current Target Allocation	37%	58%	5%			26.0%		5.5%	5.5%	29.8%	9.2%	14.2%	4.8%	5.0%	5.8%	11.5%	-20%	-30%	8.8%	9.4%
Mix 1	32%	64%	5%			18.8%	7.9%	1.9%	3.0%	26.5%	8.8%	19.9%	8.7%	4.5%	6.3%	12.7%	-22%	-32%	8.7%	10.3%
Mix 2	21%	74%	5%			12.4%	5.2%	1.3%	1.9%	30.9%	10.3%	23.2%	10.1%	4.8%	6.8%	14.3%	-25%	-36%	9.0%	11.8%



<sup>1</sup>The expected one in a hundred worst case calendar year return based on normally distributed capital market assumptions from 10,000 Monte Carlo simulations. Greater losses are possible (1% expected likelihood).

<sup>2</sup>The expected one in a hundred worst case calendar year return based on non-normally distributed capital market assumptions (factoring in skewness & kurtosis). Greater losses are possible (1% expected likelihood).

Historical Returns and Risk Metrics for each Mix represent back-tested calculations developed with the benefit of hindsight. Return calculations use an asset-weighted methodology based on the target asset allocation of each mix and the total return of index proxies used to represent each asset class and are gross of fees. Historical returns are hypothetical and do not represent returns earned by a client. It is not possible to invest in an index. Please see disclosures at the end of this presentation for additional important information, including index proxies used to represent each asset class. Please ask for a copy of DiMEO Schneider's white paper titled 10-Year Capital Market Forecasts. Past performance does not indicate future performance and it is possible to lose money when investing.





## Torrington EE

### Cash Flow Worksheet

Objective : i. Reallocate the portfolio to the proposed target allocation

ii. Introduce BlackRock Strategic Income Opportunities

iii. Replace Templeton Global Bond with BrandywineGLOBAL Global Opportunities IS

iv. Terminate Vanguard International Explorer and invest proceeds into Dodge & Cox International Stock and Artisan International

Investment Name	Ticker	Unreconciled Balance As of: 1/25/2021	Current Allocation	Target Allocation	Proposed Target Allocation	Trade Amount	Resulting Balances	Resulting Allocation
<i>Cash</i>		<b>\$54,693</b>	<b>0.1%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>\$21,282</b>	<b>\$75,975</b>	<b>0.2%</b>
Cash	CASH	\$54,693	0.1%	0.0%	0.0%	\$21,282	\$75,975	0.2%
<i>Fixed Income</i>		<b>\$16,149,947</b>	<b>34.1%</b>	<b>37.0%</b>	<b>32.0%</b>	<b>(\$1,021,282)</b>	<b>\$15,128,666</b>	<b>31.9%</b>
Vanguard Total Bond Market Index Adm	VBTLX	\$3,428,044	7.2%	8.0%	6.0%	(\$600,000)	\$2,828,044	6.0%
Metropolitan West Total Return Bond Pl	MWTSX	\$7,820,762	16.5%	18.0%	13.0%	(\$1,650,000)	\$6,170,762	13.0%
BlackRock Strategic Income Opps K	BSIKX	\$0	0.0%	0.0%	8.0%	\$3,800,000	\$3,800,000	8.0%
Eaton Vance Floating Rate Fund Class R6	ESBLX	\$2,529,705	5.3%	5.5%	2.0%	(\$1,600,000)	\$929,705	2.0%
Templeton Global Bond R6	FBNRX	\$2,371,282	5.0%	5.5%	0.0%	(\$2,371,282)	\$0	0.0%
BrandywineGLOBAL - Global Opportunities IS	GOBSX	\$0	0.0%	0.0%	3.0%	\$1,400,000	\$1,400,000	3.0%
<i>Domestic Equity</i>		<b>\$19,294,452</b>	<b>40.7%</b>	<b>39.0%</b>	<b>35.0%</b>	<b>(\$2,700,000)</b>	<b>\$16,594,452</b>	<b>35.0%</b>
Vanguard Institutional Index Instl	VINIX	\$6,448,526	13.6%	13.0%	11.5%	(\$1,000,000)	\$5,448,526	11.5%
MFS Value R6	MEIKX	\$5,344,436	11.3%	11.0%	10.0%	(\$600,000)	\$4,744,436	10.0%
Mainstay Large Cap Growth I	MLAIX	\$4,875,130	10.3%	10.0%	9.0%	(\$600,000)	\$4,275,130	9.0%
Boston Trust Small Cap	BOSOX	\$2,626,359	5.5%	5.0%	4.5%	(\$500,000)	\$2,126,359	4.5%
<i>International Equity</i>		<b>\$9,520,175</b>	<b>20.1%</b>	<b>19.0%</b>	<b>28.5%</b>	<b>\$3,975,000</b>	<b>\$13,495,175</b>	<b>28.5%</b>
Dodge & Cox International Stock Fund	DODFX	\$4,155,909	8.8%	8.0%	14.3%	\$2,600,000	\$6,755,909	14.2%
Artisan International I	APHIX	\$3,842,788	8.1%	8.0%	14.3%	\$2,900,000	\$6,742,788	14.2%
Vanguard International Explorer Inv	VINEX	\$1,521,478	3.2%	3.0%	0.0%	(\$1,525,000)	(\$3,522)	0.0%
<i>Alternatives - Real Assets</i>		<b>\$2,405,783</b>	<b>5.1%</b>	<b>5.0%</b>	<b>4.5%</b>	<b>(\$275,000)</b>	<b>\$2,130,783</b>	<b>4.5%</b>
Principal Diversified Real Asset Fund R-6	PDARX	\$2,405,783	5.1%	5.0%	4.5%	(\$275,000)	\$2,130,783	4.5%
<b>Investment Portfolio Total</b>		<b>\$47,425,050</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>\$0</b>	<b>\$47,425,050</b>	<b>100.0%</b>

Balance information has been compiled solely by Dimeo Schneider & Associates and has not been independently verified. In preparing this report, Dimeo Schneider has relied upon information provided by the investment managers and/or the custodian. Unless otherwise noted, daily valued investments are valued as of the previous business day's closing NAV. Held at source investments are valued as of the most recent month end or quarterly statement, unless otherwise noted.

You acknowledge and agree that you are solely responsible for issuing any instructions and implementing any transactions that may be necessary or appropriate in order to complete fund changes that we may recommend in light of your objectives and policies, performance by the investment managers and such other market conditions and factors which are deemed relevant. You understand and agree that our duties and responsibilities under this agreement do not include acting as your agent in connection with: (a) establishing or terminating client accounts with investment managers, (b) providing purchase or sale instructions to custodians, (c) providing investment or withdrawal instructions to mutual fund or other investment management companies, (d) providing or relaying wire transfer instructions relating to the settlement of transactions, or (e) advising on or voting proxies on your behalf. We shall not be liable to you for any failure relating to the issuance, delivery, accuracy or completeness of such instructions in effecting any such securities transactions approved by you in accordance with any rebalancing. You are responsible for verifying the accuracy of this information and directly communicating any instructions to appropriate parties. We are neither authorized to initiate transactions on your behalf nor can we assume responsibility for inaccurate or incomplete information. You understand that these transactions may not necessarily be performed simultaneously. There may be risks to being un-invested during periods of extreme market volatility. Sale proceeds and/or cash may be "out of the market" for a period of time due to transactional and procedural constraints.



## Torrington Police

### Cash Flow Worksheet

Objective : i. Reallocate the portfolio to the proposed target allocation

ii. Introduce BlackRock Strategic Income Opportunities

iii. Replace Templeton Global Bond with BrandywineGLOBAL Global Opportunities IS

iv. Terminate Vanguard International Explorer and invest proceeds into Dodge & Cox International Stock and Artisan International

Investment Name	Ticker	Unreconciled Balance As of: 1/25/2021	Current Allocation	Target Allocation	Proposed Target Allocation	Trade Amount	Resulting Balances	Resulting Allocation
<i>Cash</i>		<b>\$30,044</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>\$23,290</b>	<b>\$53,334</b>	<b>0.1%</b>
Cash	CASH	\$30,044	0.0%	0.0%	0.0%	\$23,290	\$53,334	0.1%
<i>Fixed Income</i>		<b>\$26,023,412</b>	<b>34.3%</b>	<b>37.0%</b>	<b>32.0%</b>	<b>(\$1,741,458)</b>	<b>\$24,281,954</b>	<b>32.0%</b>
Vanguard Total Bond Market Index I	VBPIX	\$5,518,835	7.3%	8.0%	6.0%	(\$975,000)	\$4,543,835	6.0%
Metropolitan West Total Return Bond PI	MWTSX	\$12,568,004	16.5%	18.0%	13.0%	(\$2,700,000)	\$9,868,004	13.0%
BlackRock Strategic Income Opps K	BSIKX	\$0	0.0%	0.0%	8.0%	\$6,075,000	\$6,075,000	8.0%
Eaton Vance Floating Rate Fund Class R6	ESBLX	\$4,095,114	5.4%	5.5%	2.0%	(\$2,575,000)	\$1,520,114	2.0%
Templeton Global Bond R6	FBNRX	\$3,841,458	5.1%	5.5%	0.0%	(\$3,841,458)	\$0	0.0%
BrandywineGLOBAL - Global Opportunities IS	GOBSX	\$0	0.0%	0.0%	3.0%	\$2,275,000	\$2,275,000	3.0%
<i>Domestic Equity</i>		<b>\$30,807,043</b>	<b>40.6%</b>	<b>39.0%</b>	<b>35.0%</b>	<b>(\$4,250,000)</b>	<b>\$26,557,043</b>	<b>35.0%</b>
Vanguard Institutional Index Instl	VINIX	\$10,236,558	13.5%	13.0%	11.5%	(\$1,500,000)	\$8,736,558	11.5%
MFS Value R6	MEIKX	\$8,495,545	11.2%	11.0%	10.0%	(\$900,000)	\$7,595,545	10.0%
Mainstay Large Cap Growth I	MLAIX	\$7,894,362	10.4%	10.0%	9.0%	(\$1,075,000)	\$6,819,362	9.0%
Boston Trust Small Cap	BOSOX	\$4,180,578	5.5%	5.0%	4.5%	(\$775,000)	\$3,405,578	4.5%
<i>International Equity</i>		<b>\$15,226,316</b>	<b>20.0%</b>	<b>19.0%</b>	<b>28.5%</b>	<b>\$6,418,169</b>	<b>\$21,644,485</b>	<b>28.5%</b>
Dodge & Cox International Stock Fund	DODFX	\$6,548,250	8.6%	8.0%	14.3%	\$4,275,000	\$10,823,250	14.3%
Artisan International I	APHIX	\$6,246,235	8.2%	8.0%	14.3%	\$4,575,000	\$10,821,235	14.2%
Vanguard International Explorer Inv	VINEX	\$2,431,831	3.2%	3.0%	0.0%	(\$2,431,831)	\$0	0.0%
<i>Alternatives - Real Assets</i>		<b>\$3,860,838</b>	<b>5.1%</b>	<b>5.0%</b>	<b>4.5%</b>	<b>(\$450,000)</b>	<b>\$3,410,838</b>	<b>4.5%</b>
Principal Diversified Real Asset Fund R-6	PDARX	\$3,860,838	5.1%	5.0%	4.5%	(\$450,000)	\$3,410,838	4.5%
<b>Investment Portfolio Total</b>		<b>\$75,947,653</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>\$0</b>	<b>\$75,947,653</b>	<b>100.0%</b>

Balance information has been compiled solely by Dimeo Schneider & Associates and has not been independently verified. In preparing this report, Dimeo Schneider has relied upon information provided by the investment managers and/or the custodian. Unless otherwise noted, daily valued investments are valued as of the previous business day's closing NAV. Held at source investments are valued as of the most recent month end or quarterly statement, unless otherwise noted.

You acknowledge and agree that you are solely responsible for issuing any instructions and implementing any transactions that may be necessary or appropriate in order to complete fund changes that we may recommend in light of your objectives and policies, performance by the investment managers and such other market conditions and factors which are deemed relevant. You understand and agree that our duties and responsibilities under this agreement do not include acting as your agent in connection with: (a) establishing or terminating client accounts with investment managers, (b) providing purchase or sale instructions to custodians, (c) providing investment or withdrawal instructions to mutual fund or other investment management companies, (d) providing or relaying wire transfer instructions relating to the settlement of transactions, or (e) advising on or voting proxies on your behalf. We shall not be liable to you for any failure relating to the issuance, delivery, accuracy or completeness of such instructions in effecting any such securities transactions approved by you in accordance with any rebalancing. You are responsible for verifying the accuracy of this information and directly communicating any instructions to appropriate parties. We are neither authorized to initiate transactions on your behalf nor can we assume responsibility for inaccurate or incomplete information. You understand that these transactions may not necessarily be performed simultaneously. There may be risks to being un-invested during periods of extreme market volatility. Sale proceeds and/or cash may be "out of the market" for a period of time due to transactional and procedural constraints.

# Investment Manager Review

## Unconstrained Fixed Income

Period Ending December 31, 2020

*Strategies Included:*

BlackRock:Str Inc Opp;I

*The information contained in this report has been taken from trade and statistical services and other sources deemed reliable, although its accuracy cannot be guaranteed and it should not be relied upon as such. Any opinion expressed herein reflects our judgment at this date and are subject to change. The illustration represents past performance and should not be considered indicative of future results. Mutual funds are sold by prospectus only. Historical performance results for investment indices and/or categories have been provided for general comparison purposes only; it should not be assumed that your account holdings do or will correspond directly to any comparative indices.*

# FIRM & STRATEGY SUMMARY

## FIRM INFORMATION

*Firm Name:* BlackRock

*Location:* New York, NY

*Ownership:* Public

*Firm Assets:* \$7.8 trillion (9/30/20)

## STRATEGY & VEHICLE INFORMATION

*Strategy Name:* BlackRock Strategic Income Opportunities

*Strategy Inception:* 2008

*Strategy Assets:* \$40.1 billion (9/30/20)

*Proposed Vehicle:* Mutual Fund

*Vehicle Name:* BlackRock Strategic Income Opportunities

*Vehicle Assets:* \$32.6 billion (9/30/20)

*Vehicle Inception:* 2008

*Vehicle Fees:* 0.84% (I Share - BSIIIX) (0.60% excluding investment related expenses)

*Another shareclass is shown in the performance section due to a longer history*

## Investment Team:

Rick Rieder, Bob Miller, and David Rogal are the lead portfolio managers and have worked on the strategy since 2010, 2011, and 2017, respectively. They are supported by the investment professionals of the fundamental fixed income platform at the firm.

## Investment Philosophy:

This strategy combines traditional and non-traditional fixed income techniques to provide total return, income and downside protection. The Fund seeks to use multiple alpha sources to create returns that are uncorrelated to traditional fixed income markets and can provide good returns in a variety of interest rate environments.

## Process:

The Fund is managed using a risk budgeting approach. The portfolio managers meet initially to develop macroeconomic and thematic views on the market. This view establishes the baseline risk allocation and will be used to assess return potential and carry across potential sectors. The portfolio managers will then work with sector specialists to develop trade ideas that fit the risk guidelines that were established. Each position fits into traditional fixed income, absolute return, or macro buckets. Traditional trades tend to include beta exposure to virtually all sectors of the fixed income market while absolute return trades tend to be more beta neutral, alpha driven trades. This may include long/short relative value, capital structure arbitrage, and systematic trading. Rieder and Miller are responsible for the macro portfolio which is used to compliment the other risk exposures in the Fund and is the main source for overall duration management. The portfolio managers expect to add value over time through strategic asset allocation, decision timing with regards to sector rotation, and security selection. The portfolio managers meet daily with sector specialists and members of the risk management group to review the portfolio.

## Portfolio Construction:

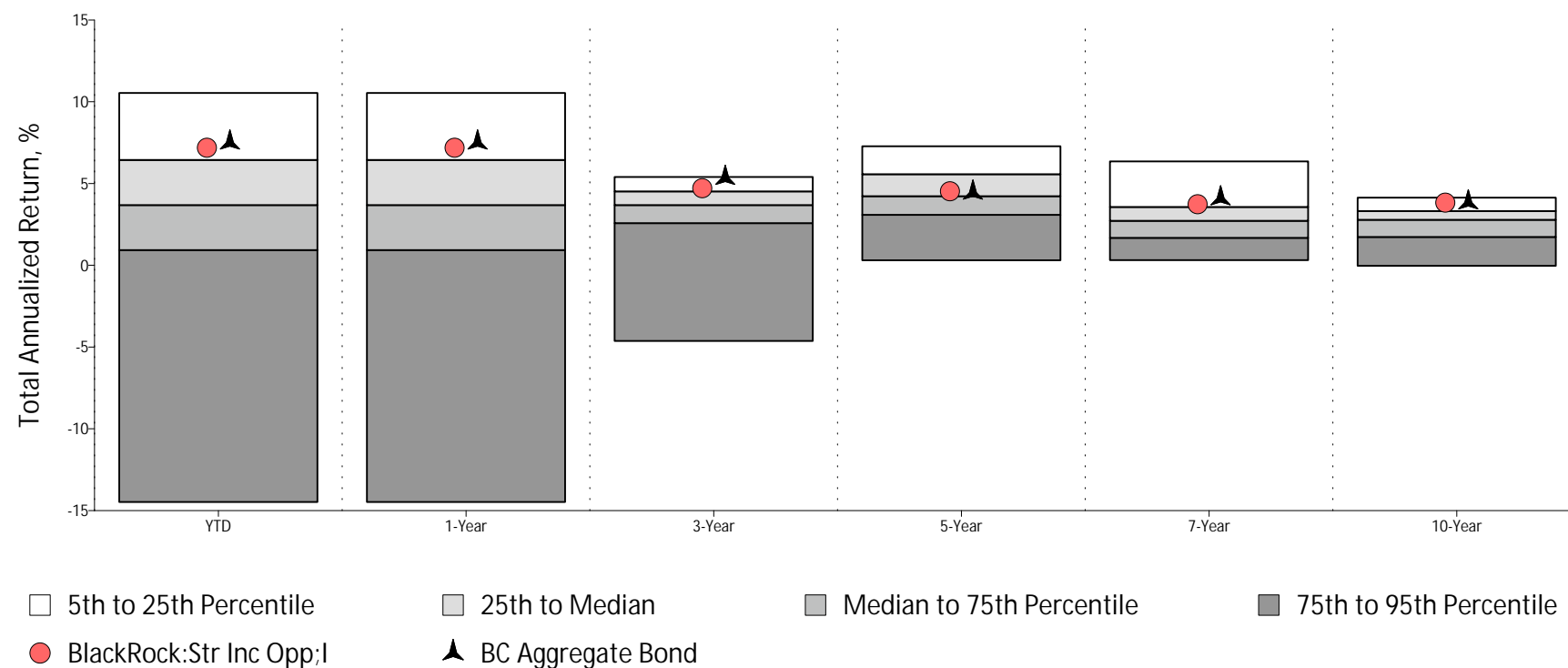
The portfolio has the ability to invest in virtually all fixed income markets using both cash and derivatives to gain exposure. The Fund can invest across credit qualities provided that it stays within the stated risk budget. Portfolio duration can range from -2 to 7 years but since inception has typically been in the 1 to 4 year range. Treasuries, agency MBS, investment grade corporates, and high yield corporates have historically been the largest allocations in the portfolio. The team seeks to have no biases but rather always seek the best relative value opportunities.

## Risk Controls:

Risk is controlled primarily through the risk budgeting approach which seeks to limit the contribution to risk from any one sector or factor. The portfolio managers review the "dashboard" daily, a proprietary tool developed by the firms risk management group. Two members of the risk management team are dedicated to the product.

*For the prospectus please go to [www.blackrock.com](http://www.blackrock.com)*

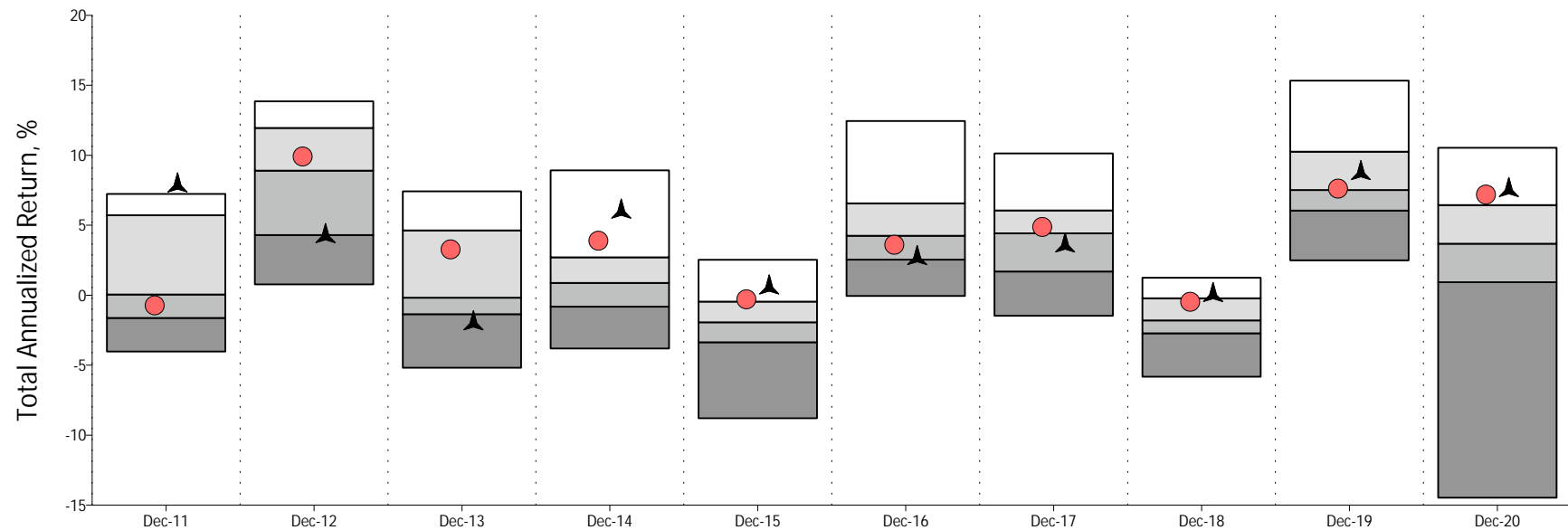
# ANNUALIZED PERFORMANCE & PEER COMPARISON



	YTD	1-Year	3-Year	5-Year	7-Year	10-Year
BlackRock:Str Inc Opp;I	7.19	7.19	4.72	4.53	3.73	3.83
<i>Universe Ranking %</i>	18	18	18	43	22	10
BC Aggregate Bond	7.51	7.51	5.34	4.44	4.09	3.84
<i>Universe Ranking %</i>	15	15	6	44	17	9

Universe ranking is based on the Lipper Alternative Credit Focus Universe. Returns greater than one year are annualized.

# CALENDAR YEAR PERFORMANCE



5th to 25th Percentile
  25th to Median
  Median to 75th Percentile
  75th to 95th Percentile

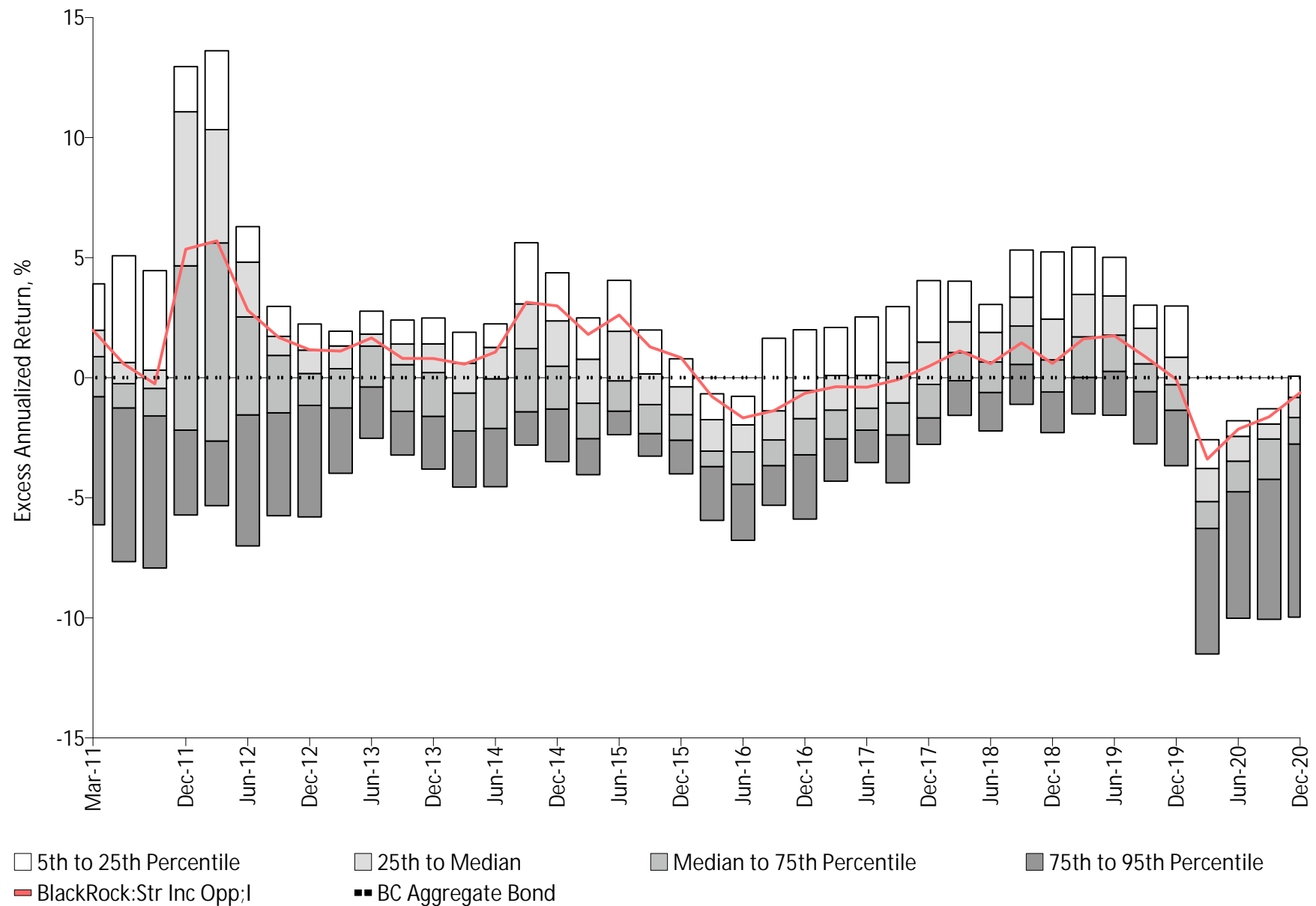
● BlackRock:Str Inc Opp;l
 ▲ BC Aggregate Bond

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BlackRock:Str Inc Opp;l	-0.73	9.92	3.28	3.89	-0.30	3.61	4.88	-0.46	7.62	7.19
<i>Universe Ranking %</i>	69	38	30	17	25	59	43	29	48	18
BC Aggregate Bond	7.84	4.22	-2.02	5.97	0.55	2.65	3.54	0.01	8.72	7.51
<i>Universe Ranking %</i>	0	75	83	10	16	73	56	19	37	15

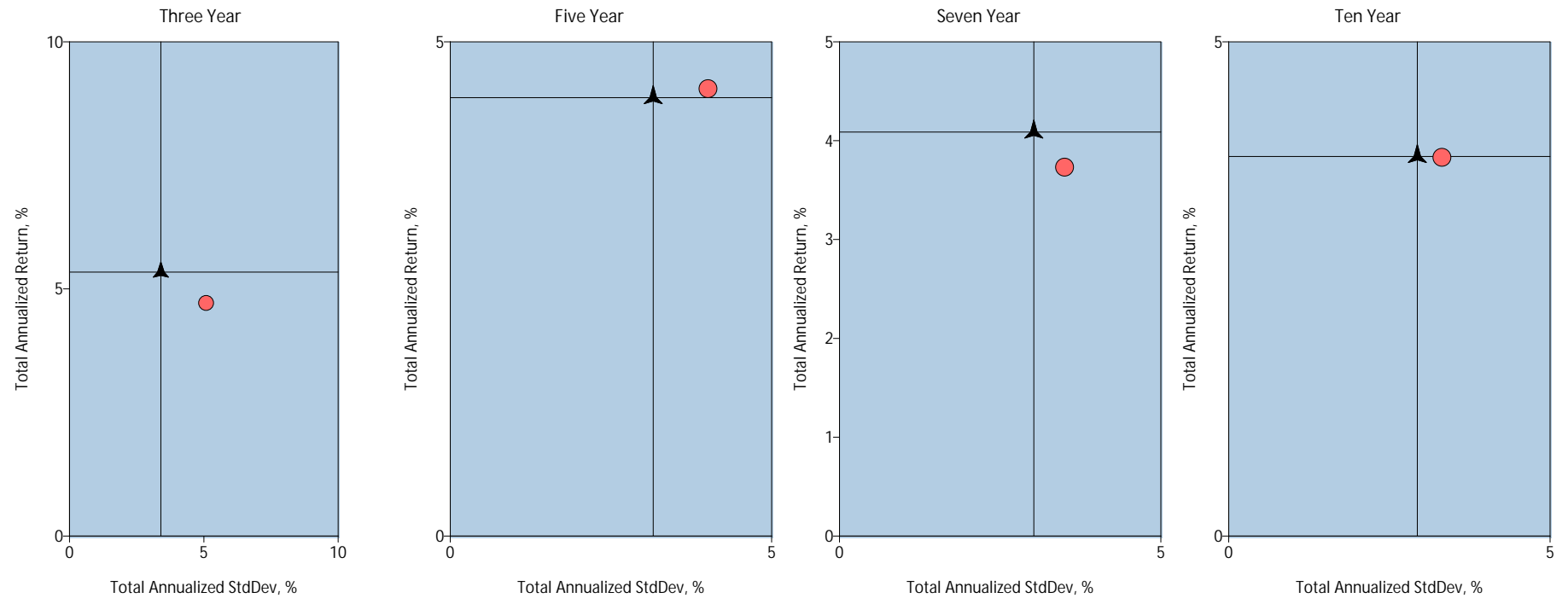
Universe ranking is based on the Lipper Alternative Credit Focus Universe.

Data as of December 31, 2020 unless otherwise noted.

# THREE-YEAR ROLLING EXCESS RETURNS



# RETURN VS. RISK



● BlackRock:Str Inc Opp;I  
▲ BC Aggregate Bond

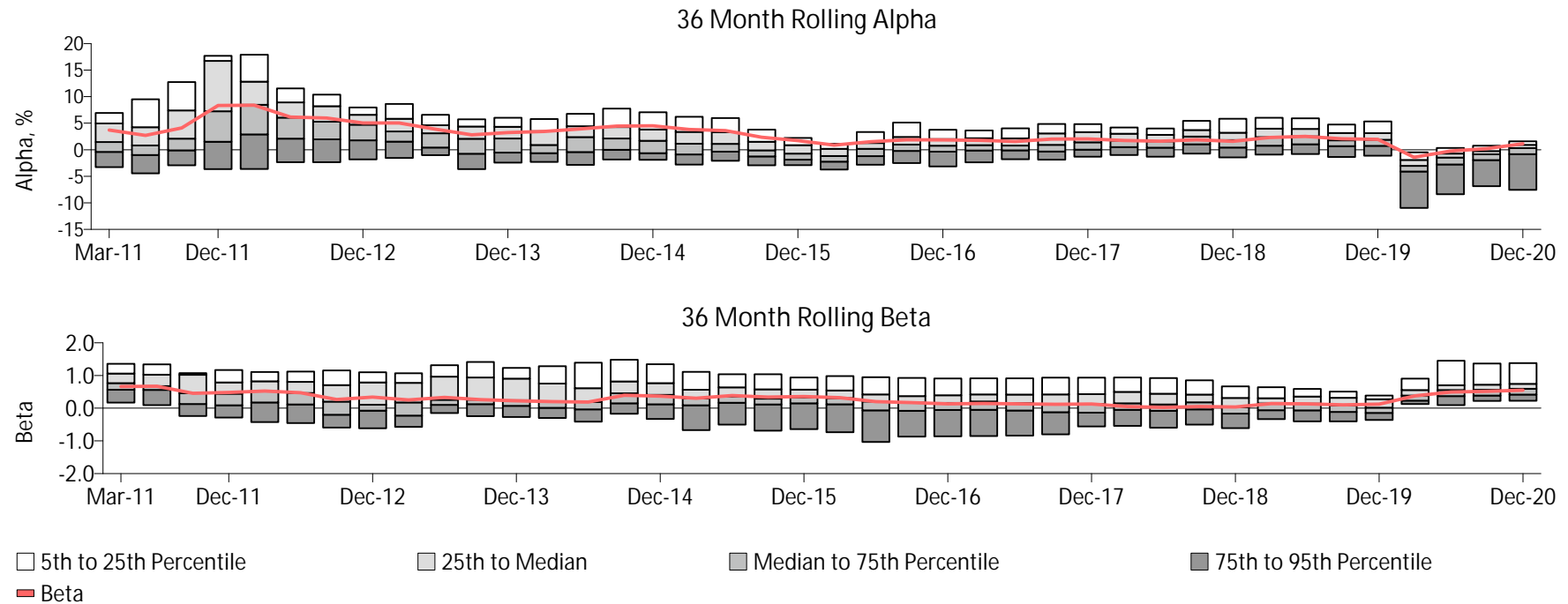
	3 Years		5 Years		7 Years		10 Years	
	Return	Std Dev	Return	Std Dev	Return	Std Dev	Return	Std Dev
BlackRock:Str Inc Opp;I	4.72	5.09	4.53	4.01	3.73	3.50	3.83	3.32
BC Aggregate Bond	5.34	3.40	4.44	3.16	4.09	3.02	3.84	2.93

Data greater than one year is annualized.

Data as of December 31, 2020 unless otherwise noted.



# PERFORMANCE STATISTICS

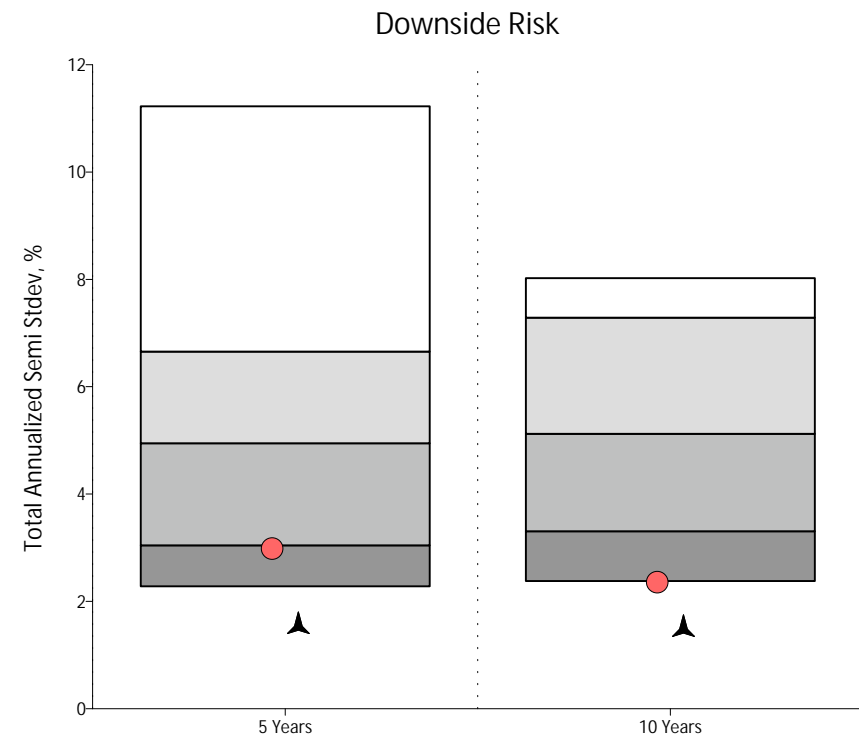
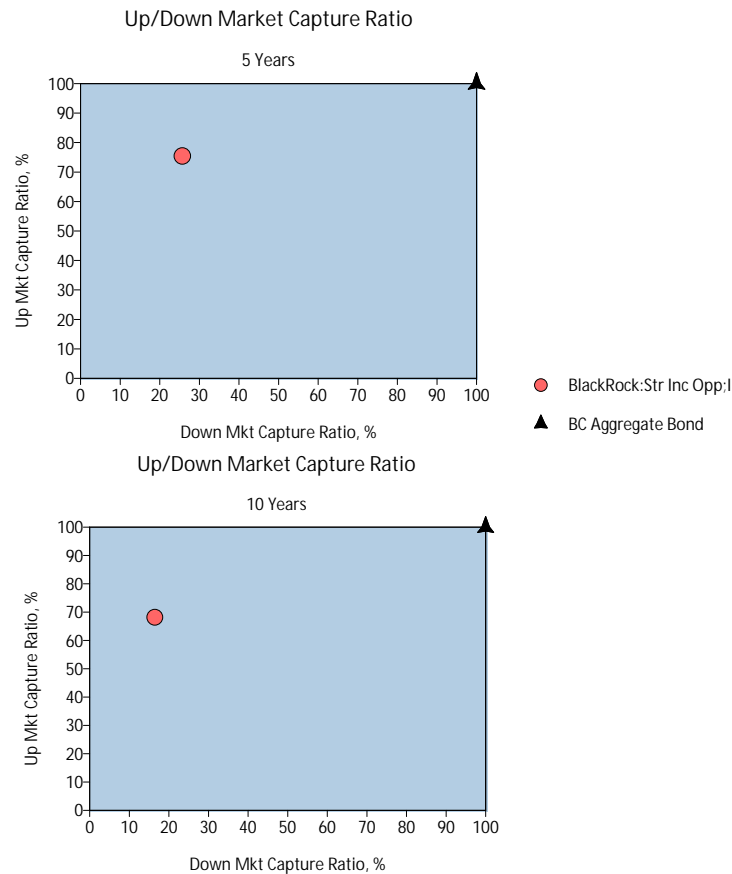


## MPT STATISTICS

	5 Years					
	Alpha, %	Beta	R-Squared, %	Sharpe Ratio	Tracking Error, %	Batting Average
BlackRock:Str Inc Opp;l	2.08	0.39	8.63	0.81	4.38	0.67
BC Aggregate Bond	0.00	1.00	100.00	1.02	0.00	0.00

	10 Year					
	Alpha, %	Beta	R-Squared, %	Sharpe Ratio	Tracking Error, %	Batting Average
BlackRock:Str Inc Opp;l	2.16	0.32	7.77	0.94	3.80	0.58
BC Aggregate Bond	0.00	1.00	100.00	1.09	0.00	0.00

# MARKET CAPTURE STATISTICS



	5 Years			10 Years		
	Up Mkt Capture Ratio, %	Down Mkt Capture Ratio, %	Annualized Semi Stdev to date, %	Up Mkt Capture Ratio, %	Down Mkt Capture Ratio, %	Annualized Semi Stdev to date, %
BlackRock:Str Inc Opp:I	75.46	25.69	2.98	68.17	16.43	2.36
BC Aggregate Bond	100.00	100.00	1.53	100.00	100.00	1.48

# MANAGER REVIEW

Manager:  
BlackRock:Str Inc Opp;l

Benchmark:  
BC Aggregate Bond

Universe:  
Lipper Alternative Credit Focus Universe

Data as of:  
December 31, 2020

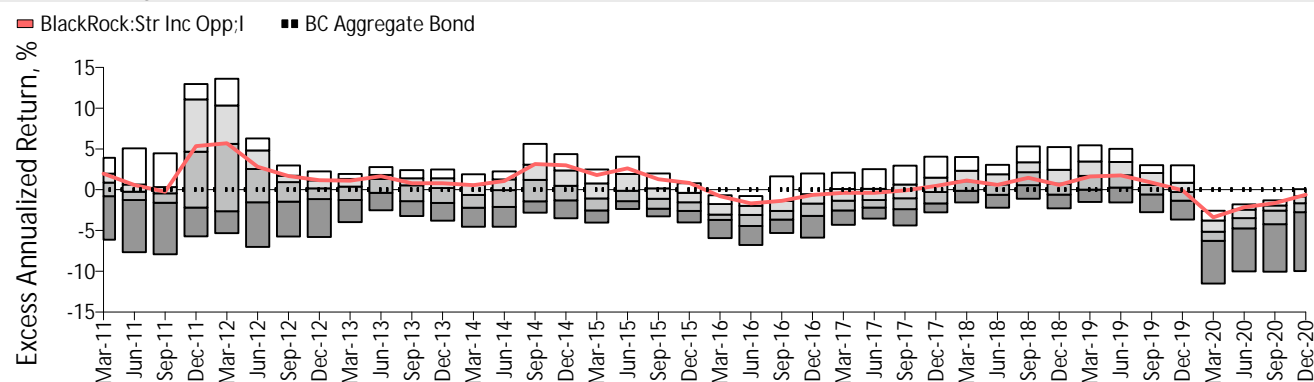
## Trailing Returns

	3M	YTD	1 Year	3 Years	5 Years	7 Years	10 Years
Mgr	4.11	7.19	7.19	4.72	4.53	3.73	3.83
Mgr Rank	48	18	18	18	43	22	10
Bmk	0.67	7.51	7.51	5.34	4.44	4.09	3.84
Bmk Rank	93	15	15	6	44	17	9

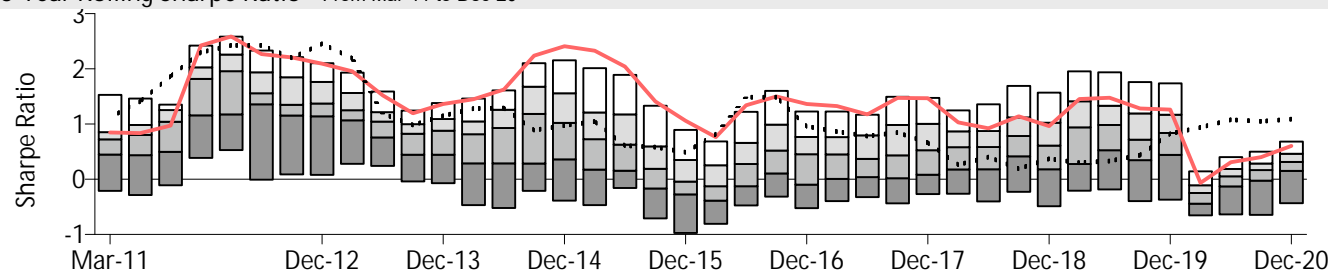
## Calendar Year Returns

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Mgr	25.23	13.39	-0.73	9.92	3.28	3.89	-0.30	3.61	4.88	-0.46	7.62	7.19
Mgr Rank	42	5	69	38	30	17	25	59	43	29	48	18
Bmk	5.93	6.54	7.84	4.22	-2.02	5.97	0.55	2.65	3.54	0.01	8.72	7.51
Bmk Rank	73	57	0	75	83	10	16	73	56	19	37	15

## 3-Year Rolling Excess Returns - From Mar-11 to Dec-20



## 3-Year Rolling Sharpe Ratio - From Mar-11 to Dec-20



## Return vs. Risk

	3 Years		5 Years		7 Years		10 Years	
	Return	Std Dev	Return	Std Dev	Return	Std Dev	Return	Std Dev
Mgr	4.72	5.09	4.53	4.01	3.73	3.50	3.83	3.32
Bmk	5.34	3.40	4.44	3.16	4.09	3.02	3.84	2.93
Unv	3.68	7.44	4.23	6.20	2.72	5.63	2.79	6.64

## Downside Risk

	Semi Std Dev	3 Years	5 Years	7 Years	10 Years
Mgr		3.82	2.98	2.56	2.36
Bmk		1.33	1.53	1.45	1.48
Unv		5.98	4.95	4.35	5.12

## Market Capture

	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Up Mkt Capture	80.53	75.46	66.91	68.17
Down Mkt Capture	64.82	25.69	24.87	16.43

## Volatility & Correlation

	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Beta	0.55	0.39	0.36	0.32
R-Squared	12.50	8.63	9.00	7.77
Tracking Error	5.13	4.38	3.92	3.80

## Perf Stats - Mar-11 to Dec-20 (3-Year Rolling)

	Manager	Benchmark
% in 1st Quartile	37.50	22.50
% in 2nd Quartile	50.00	30.00
% in 3rd Quartile	12.50	40.00
% in 4th Quartile	0.00	7.50
% > Bmk	67.50	-
% < Bmk	32.50	-

## Qtrly Return/Rank

	Mgr		Bmk	
1st-18	0.42	39	-1.46	94
2nd-18	-0.80	67	-0.16	45
3rd-18	0.37	59	0.02	78
4th-18	-0.44	15	1.64	3
1st-19	2.37	80	2.94	61
2nd-19	2.59	21	3.08	8
3rd-19	0.87	52	2.27	3
4th-19	1.59	37	0.18	94
1st-20	-5.76	22	3.15	0
2nd-20	6.30	66	2.90	89
3rd-20	2.78	43	0.62	94
4th-20	4.11	48	0.67	93

## Risk Adjusted Returns

Sharpe Ratio	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Mgr	0.76	0.60	0.81	0.80	0.94
Mgr Rank	15	12	15	6	3
Bmk	1.94	1.09	1.02	1.06	1.09
Bmk Rank	0	0	6	1	1

Alpha	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Mgr	-2.38	1.14	2.08	1.72	2.16
Mgr Rank	14	16	42	33	28

Info Ratio	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Mgr	-0.04	-0.12	0.02	-0.09	0.00
Mgr Rank	19	27	41	25	10

# Investment Manager Review

## Global Fixed Income

Period Ending December 31, 2020

### *Strategies Included:*

Brandywine Gbl Opps Bond IS  
Templeton GI Bond;R6

*The share classes and expense ratios shown on the Firm & Strategy pages in this report reflect the lowest expense share class of the fund. The actual share classes suitable and available for your plan may vary. Alternative share classes may be shown in the performance and statistics pages to provide the longest available track record.*

*The information contained in this report has been taken from trade and statistical services and other sources deemed reliable, although its accuracy cannot be guaranteed and it should not be relied upon as such. Any opinion expressed herein reflects our judgment at this date and are subject to change. The illustration represents past performance and should not be considered indicative of future results. Mutual funds are sold by prospectus only. Historical performance results for investment indices and/or categories have been provided for general comparison purposes only; it should not be assumed that your account holdings do or will correspond directly to any comparative indices.*

# FIRM & STRATEGY SUMMARY

## FIRM INFORMATION

*Firm Name:* Brandywine Global

*Location:* Philadelphia, PA

*Ownership:* Subsidiary of Franklin Templeton

*Firm Assets:* \$64.5 billion (9/30/20)

## STRATEGY & VEHICLE INFORMATION

*Strategy Name:* Global Opportunistic Fixed Income

*Strategy Inception:* 1998

*Strategy Assets:* \$26.9 billion (9/30/20)

*Proposed Vehicle:* Mutual Fund

*Vehicle Name:* BrandywineGlobal Global Opportunities Bond Fund

*Vehicle Assets:* \$2.1 billion (9/30/20)

*Vehicle Fees:* 0.58% (IS - GOBSX)

## Investment Team:

Stephen Smith has led the team since its inception in 1992. The portfolio is co-managed by David Hoffman, who joined the team in 1995. The team is rounded out by an associate portfolio manager, dedicated analysts, and a dedicated trading team.

## Investment Philosophy:

The Global Fixed Income team's approach is value driven, active and strategic. It focuses on finding value through a combination of above average real interest rates and an undervalued currency. Research is focused in areas where existing economic and market conditions enable that value to be realized in a short time frame.

## Process:

The initial universe is comprised of sovereign debt and currencies in the index as well as the corporate and MBS securities in those countries. The process begins with a macro-economic analysis on a country by country basis in order to rank them based on opportunities. Further analysis is focused on countries with the highest real interest rates as inflation adjusted yield is the team's primary measure of value. Inflation trends, political risks, monetary trends, business cycle and liquidity measures are all considered. Currency valuations are examined next relative to their historic averages. Ideal situations are countries with high real rates combined with appreciating currencies (the team will hedge any currencies they feel are overvalued). The majority of investments are made in sovereign debt, however when the market overestimates credit risk, spread sectors may provide attractive opportunities. Individual security selection is a residual of the country and currency selection process. Spread product analysis is conducted by both quantitative and fundamental analysts on the team and only those securities that present significant value are added to the portfolio. Yield curve analysis, desired durations and wideness of spreads relative to government issues are all considered. Allocations to high yield and emerging markets are made on a tactical basis.

## Portfolio Construction:

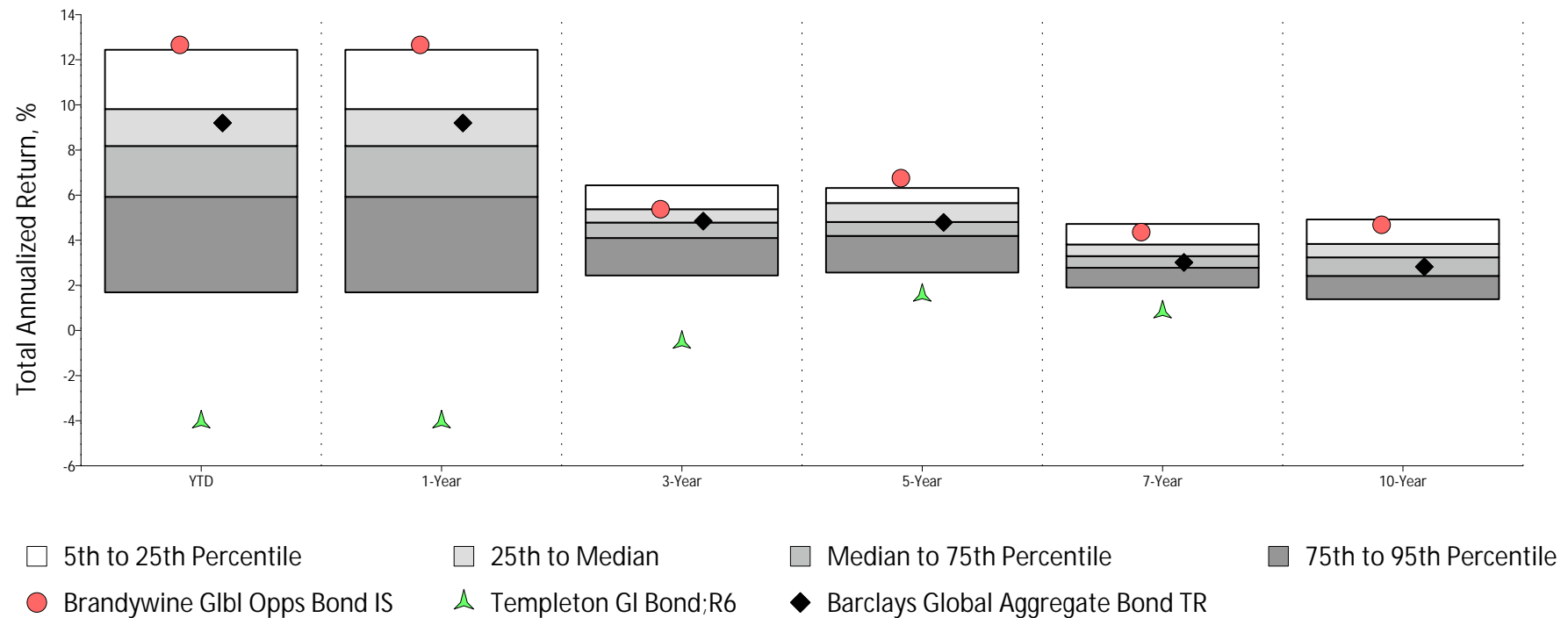
The portfolio is constructed from the top down by first identifying attractive countries and currencies. The portfolio is typically concentrated in 8-14 countries deemed to have the best total return potential. Duration is typically intermediate to long in countries where real interest rates are high.

## Risk Controls:

The investment team focuses on the absolute value of securities and markets in which they invest. Risk is viewed as combination of price and information risk. The goal is to take on very little price risk by purchasing only undervalued securities while mitigating information risk through comprehensive analysis.

For the prospectus please go to [www.bandywineglobal.com](http://www.bandywineglobal.com)

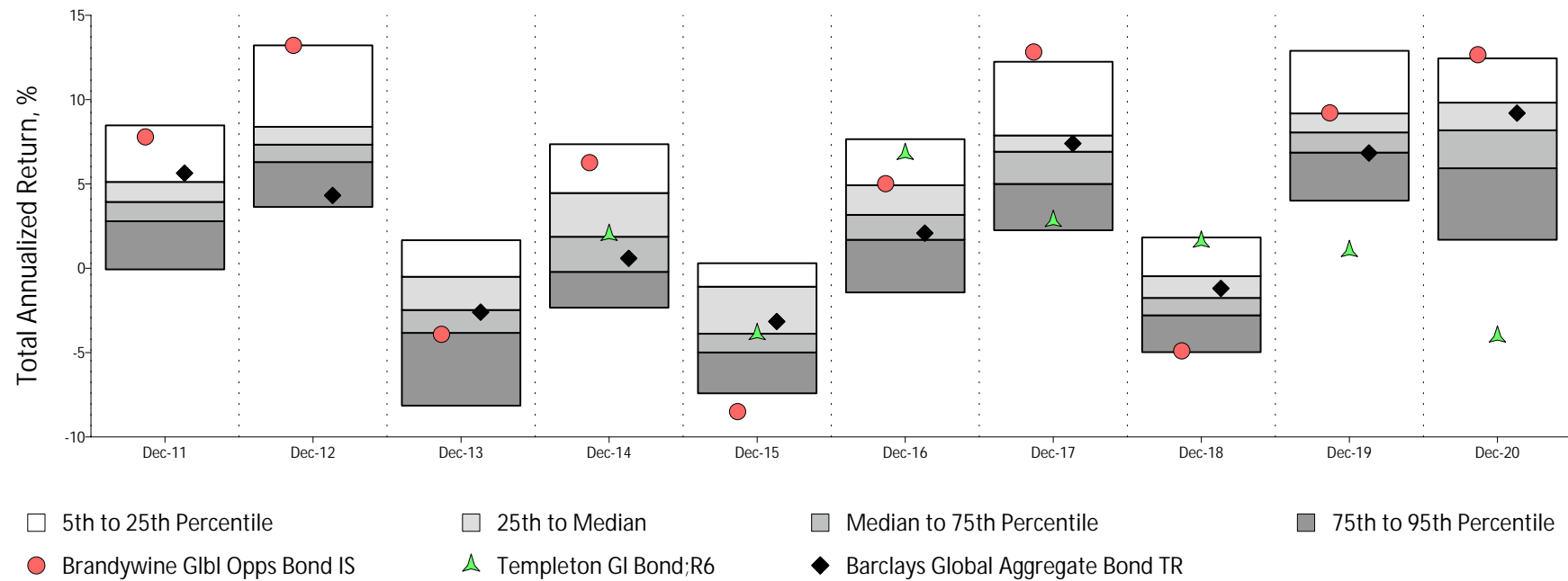
# ANNUALIZED PERFORMANCE & PEER COMPARISON



	YTD	1-Year	3-Year	5-Year	7-Year	10-Year
Brandywine Gbl Opps Bond IS	12.66	12.66	5.38	6.75	4.36	4.68
<i>Universe Ranking %</i>	4	4	25	2	10	9
Templeton GI Bond;R6	-4.06	-4.06	-0.53	1.56	0.82	NA
<i>Universe Ranking %</i>	100	100	100	99	100	NA
Barclays Global Aggregate Bond TR	9.20	9.20	4.85	4.79	3.01	2.83
<i>Universe Ranking %</i>	35	35	48	51	66	66

Alternative share classes with longer track records may be shown for performance. Please refer to the manager summary pages for share class information.  
 Universe ranking is based on the Lipper Global Income Universe.  
 Returns greater than one year are annualized.

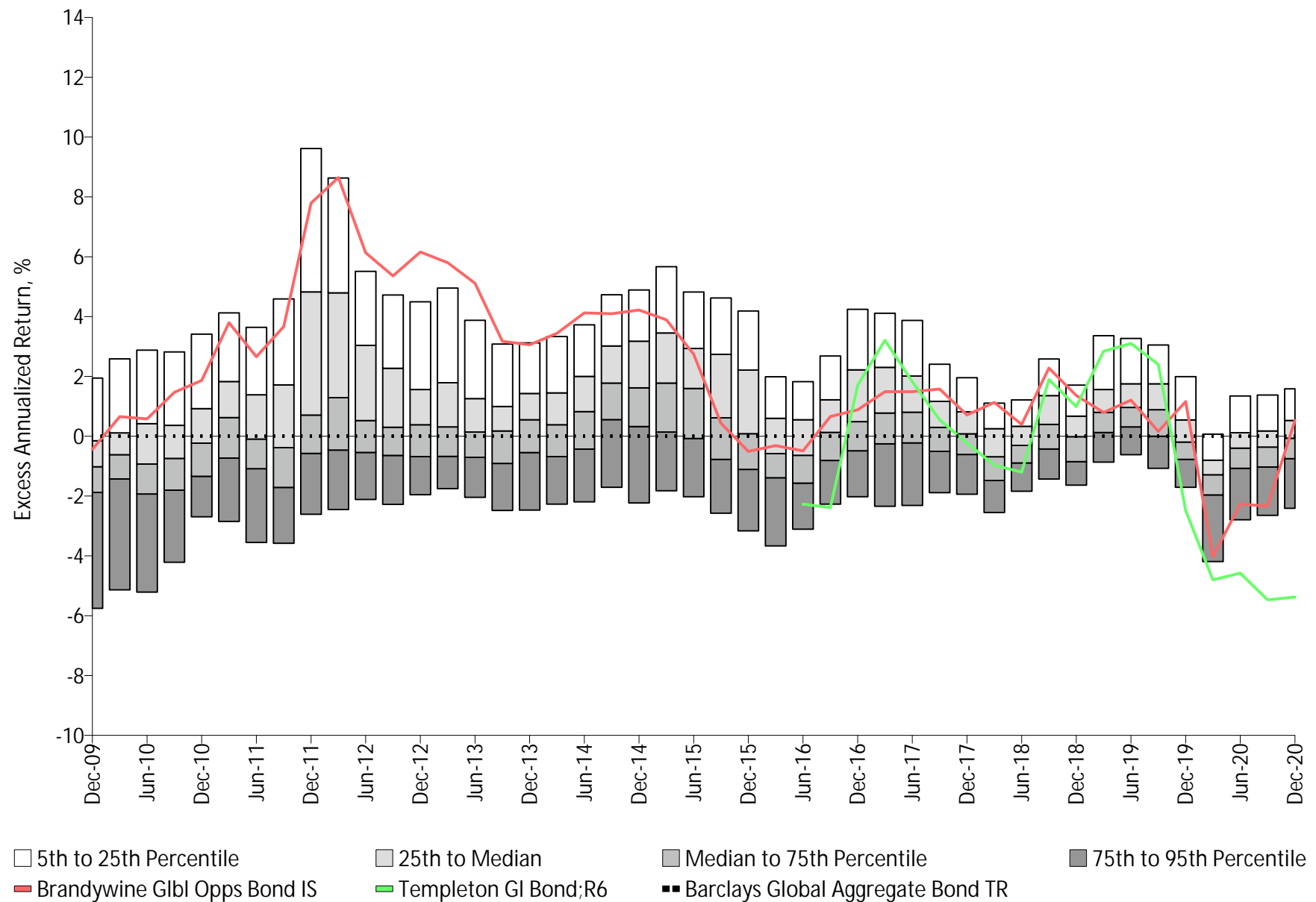
# CALENDAR YEAR PERFORMANCE



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Brandywine Gbl Opps Bond IS	7.79	13.22	-3.92	6.26	-8.50	5.02	12.83	-4.90	9.21	12.66
<i>Universe Ranking %</i>	8	5	77	12	97	24	2	94	25	4
Templeton GI Bond;R6	NA	NA	NA	1.97	-3.91	6.78	2.79	1.57	1.01	-4.06
<i>Universe Ranking %</i>	NA	NA	NA	48	50	8	88	6	100	100
Barclays Global Aggregate Bond TR	5.64	4.32	-2.60	0.59	-3.15	2.09	7.40	-1.20	6.84	9.20
<i>Universe Ranking %</i>	21	93	52	61	37	68	38	40	76	35

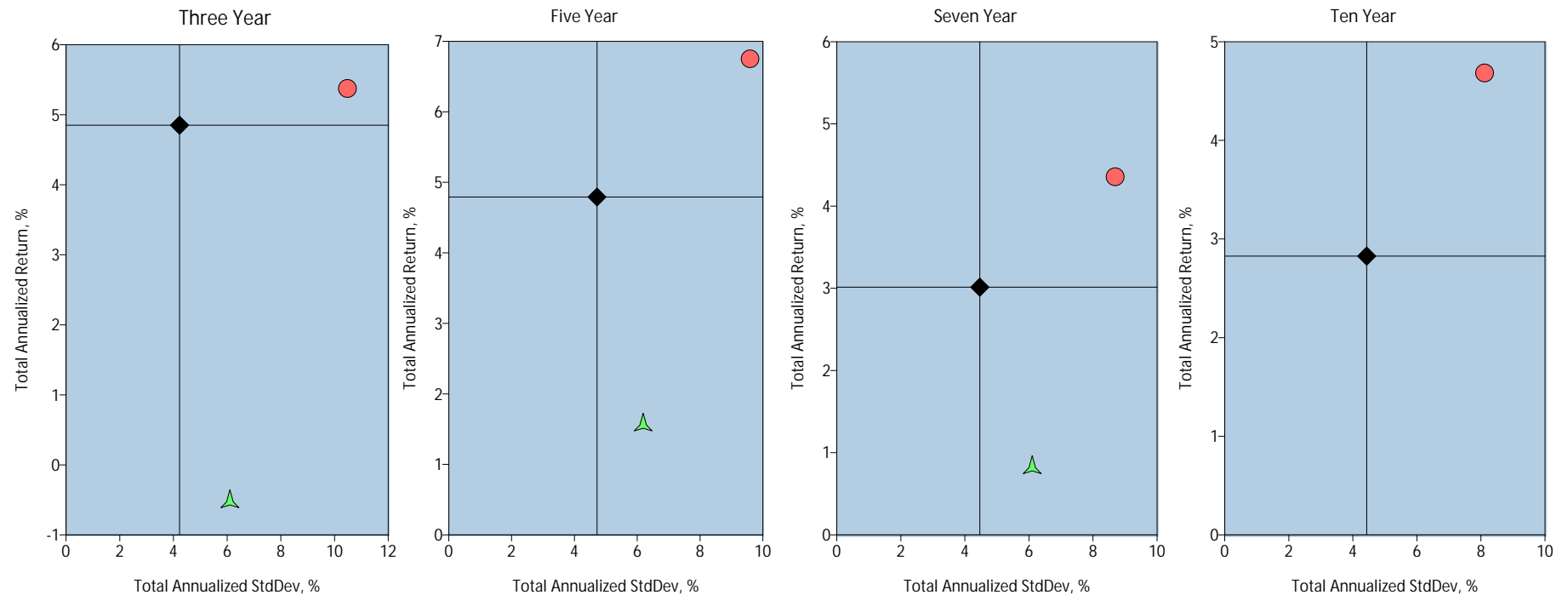
Alternative share classes with longer track records may be shown for performance. Please refer to the manager summary pages for share class information. Universe ranking is based on the Lipper Global Income Universe.

# THREE-YEAR ROLLING EXCESS RETURNS





# RETURN VS. RISK



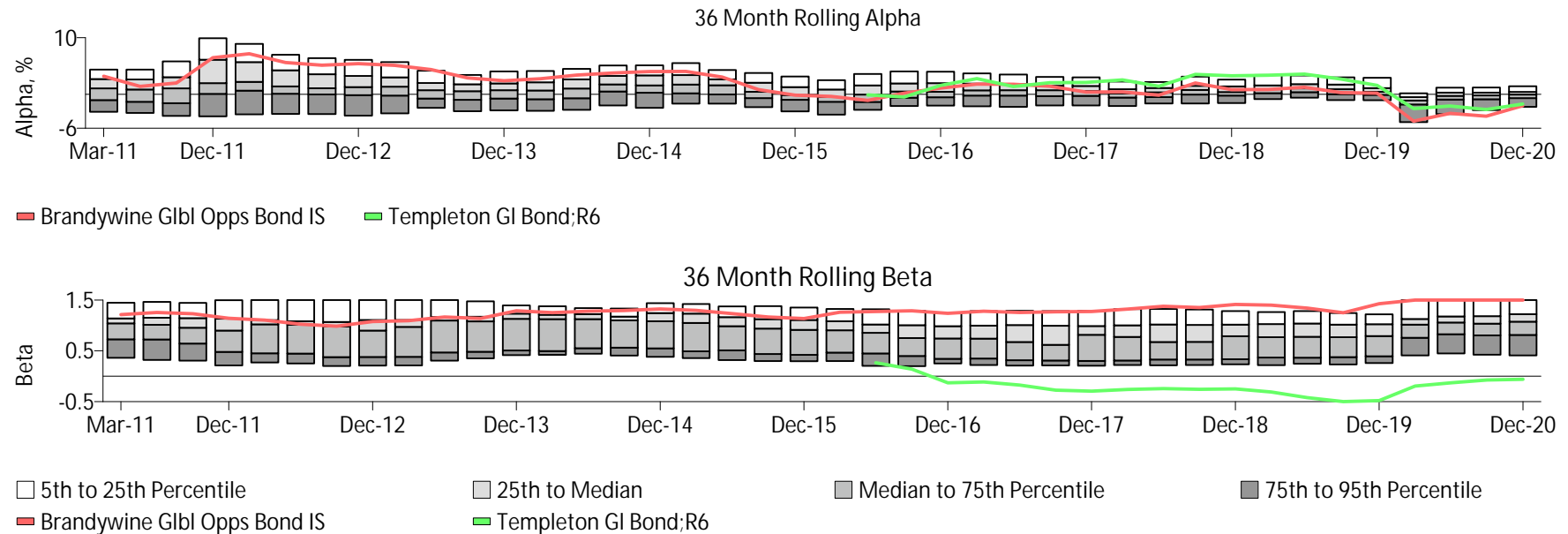
● Brandywine Gbl Opps Bond IS    ▲ Templeton GI Bond;R6  
 ◆ Barclays Global Aggregate Bond TR

	3 Years		5 Years		7 Years		10 Years	
	Return	Std Dev	Return	Std Dev	Return	Std Dev	Return	Std Dev
Brandywine Gbl Opps Bond IS	5.38	10.48	6.75	9.59	4.36	8.69	4.68	8.11
Templeton GI Bond;R6	-0.53	6.11	1.56	6.19	0.82	6.10	NA	NA
Barclays Global Aggregate Bond TR	4.85	4.23	4.79	4.72	3.01	4.47	2.83	4.43

Data greater than one year is annualized.

Data as of December 31, 2020 unless otherwise noted.

# PERFORMANCE STATISTICS



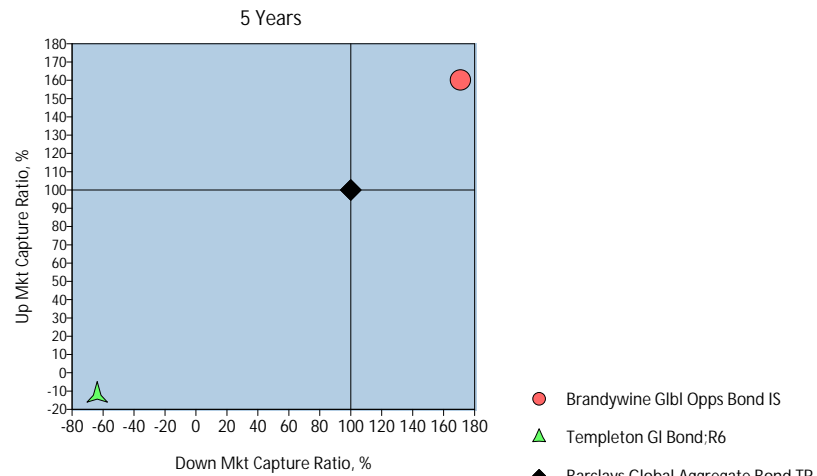
## MPT STATISTICS

	5 Year					
	Alpha, %	Beta	R-Squared, %	Sharpe Ratio	Tracking Error, %	Batting Average
Brandywine Gbl Opps Bond IS	-0.01	1.62	62.91	0.60	6.58	0.55
Templeton GI Bond;R6	1.21	-0.18	1.98	0.09	8.36	0.42
Barclays Global Aggregate Bond TR	0.00	1.00	100.00	0.76	0.00	0.00

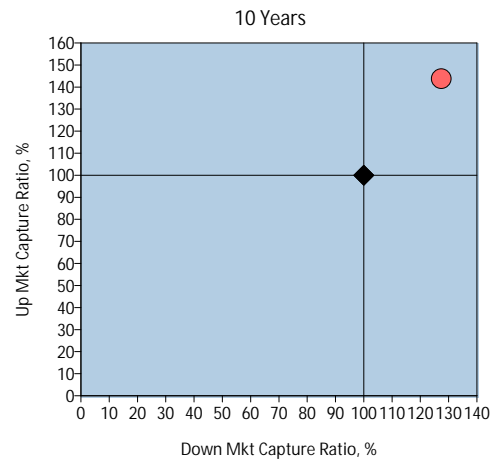
	7 Year					
	Alpha, %	Beta	R-Squared, %	Sharpe Ratio	Tracking Error, %	Batting Average
Brandywine Gbl Opps Bond IS	0.46	1.50	59.02	0.43	6.03	0.52
Templeton GI Bond;R6	0.44	-0.14	0.99	0.02	7.94	0.44
Barclays Global Aggregate Bond TR	0.00	1.00	100.00	0.49	0.00	0.00

# MARKET CAPTURE STATISTICS

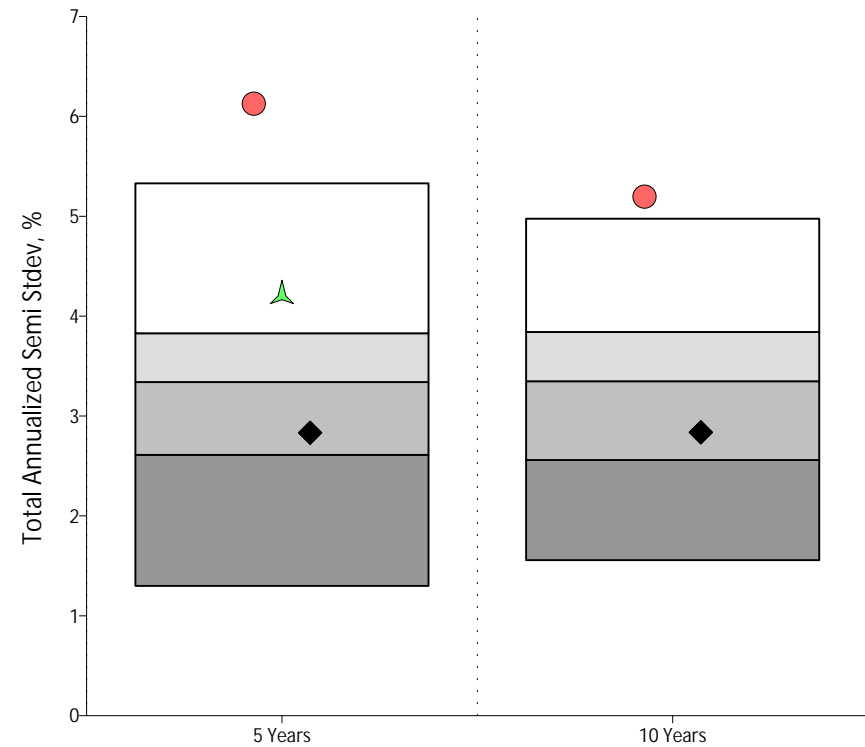
Up/Down Market Capture Ratio



Up/Down Market Capture Ratio



Downside Risk



	5 Years			10 Years		
	Up Mkt Capture Ratio, %	Down Mkt Capture Ratio, %	Annualized Semi Stdev to date, %	Up Mkt Capture Ratio, %	Down Mkt Capture Ratio, %	Annualized Semi Stdev to date, %
Brandywine Gbl Opps Bond IS	160.20	170.76	6.13	143.80	127.38	5.20
Templeton GI Bond;R6	-12.26	-63.75	4.20	NA	NA	NA

# REPORT GLOSSARY

**Alpha** - Alpha measures the difference between an investment's actual performance, and its expected performance as indicated by its market sensitivity (Beta). A positive Alpha indicates the risk-adjusted performance is above that index.

**Batting Average** - This measures the frequency with which a manager performs better than a selected benchmark. It is computed by dividing the number of positive excess returns by the total number of excess returns during the period.

**Beta** - Beta is defined as a Manager's sensitivity to market movements and is used to evaluate market related, or systematic risk. Beta is a measure of the linear relationship, over time, of the Manager's returns and those of the Benchmark. Beta is computed by regressing the Manager's excess returns over the risk free rate (cash proxy) against the excess returns of the Benchmark over the risk free rate. An investment that is as equally volatile as the market will have a Beta of 1.0; an investment half as volatile as the market will have a Beta of 0.5; and so on. Thus, Betas higher than 1.0 indicate that the fund is more volatile than the market.

**Down Market (Mkt) Capture Ratio** - Down Market Capture Ratio is a measure of an investment's performance in down markets relative to the market itself. A down market is one in which the market's return is less than zero. The lower the investment's Down Market Capture Ratio, the better the investment protected capital during a market decline. A negative Down Market Capture Ratio indicates that an investment's returns rose while the market declined.

**Downside Risk (Semi Standard Deviation, Semi StdDev, or Downside Deviation)** - Downside Risk only identifies volatility on the down side. Downside Risk measures the variability of returns below zero, whereas Standard Deviation attributes volatility in either direction to risk. The Downside Risk method calculates the deviations below zero for each observed return. Each time a return falls below zero, the sum is divided by the number of observations and the square root is taken. This result is then shown on an annualized basis.

**Excess** - Denotes that a statistic is being measured relative to the Market Index selected.

**R-Squared ( $R^2$ )** - This statistic indicates the degree to which the observed values of one variable, such as the returns of a managed portfolio, can be explained by, or are associated with the values of another variable, such as a Market Index. The  $R^2$  values generally range from 0.0 to 1.0. An investment with an  $R^2$  of 1.0 is perfectly correlated with the market. An  $R^2$  of 0.95, for example, implies that 95% of the fluctuations in a portfolio are explained by fluctuations in the market.

**Sharpe Ratio** - The Sharpe Ratio indicates the excess return per unit of total risk as measured by Standard Deviation. It is a ratio of excess returns over the risk free rate to the Standard Deviation. The Sharpe Ratio is a measure of the premium earned for the risk incurred by the portfolio.

**Standard Deviation (StdDev)** - A measure of the extent to which observations in a series vary from the arithmetic mean of the series. The Standard Deviation of a series of asset returns is a measure of volatility, or risk, of the asset. The more volatile the returns, the higher the standard deviation will be.

**Style Map** - Plots the historical exposures of a fund's style across appropriate dimensions, such as growth vs. value for equity funds. By viewing this chart, an investor can determine a manager's style consistency over time. Returns based style analysis is used.

**Tracking Error** - Tracking Error is a measure of how closely an investment's returns track the returns of the selected Market Index. It is the annualized Standard Deviation of the differences between the investment's and the associated index's returns. If an investment tracks its associated index closely, then Tracking Error will be low. If an investment tracks its associated index perfectly, then Tracking Error will be zero.

**Up Market (Mkt) Capture Ratio** - Up Market Capture Ratio is a measure of a product's performance in up markets relative to the market itself. An up market is one in which the market's return is greater than or equal to zero. The higher the investment's Up Market Capture Ratio, the better the investment capitalized on a rising market.



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# APPENDIX FRONTIER ENGINEER ANALYSIS DISCLOSURES



# CAPITAL MARKET ASSUMPTIONS (20-Year)

Return & Risk Assumptions (Forecasts)	Arithmetic Return	Geometric Return	Standard Deviation	Skewness	Kurtosis
Cash	0.7%	0.7%	0.0%	0	0
TIPS	2.2%	1.7%	10.1%	-0.79	5.27
US Bond	2.4%	2.1%	6.8%	-0.23	1.01
US Bonds - Dynamic	3.0%	2.8%	5.7%	-1.11	8.21
For. Dev. Bond	1.8%	1.4%	8.9%	0.00	0.69
HY Bond	5.4%	4.4%	14.1%	-1.18	8.90
EM Bond	4.2%	2.7%	17.0%	-1.71	9.62
Global Bonds	2.0%	1.8%	7.2%	-0.15	0.07
US Equity (LC)	7.6%	6.3%	16.4%	-0.58	1.04
US Equity (SC)	8.8%	6.7%	20.3%	-0.50	1.37
Int'l Dev. Equity	10.3%	7.9%	21.9%	-0.57	1.42
EM Equity	13.5%	9.4%	28.9%	-0.70	1.98
Real Estate	8.4%	6.2%	21.1%	-0.72	7.62
Broad Real Assets	5.6%	4.8%	12.9%	-1.89	11.36
Midstream Energy	16.1%	9.0%	37.6%	0.01	19.69
HFoF Multi-Strat	6.7%	6.3%	8.7%	-0.93	5.30
Private Equity	12.0%	9.4%	22.9%	0.00	0.00

January 1, 2021 Twenty-Year Forecasted CMA's

Correlation Assumptions (Forecasts)	Cash	TIPS	US Bond	US Bonds - Dynamic	For. Dev. Bond	HY Bond	EM Bond	Global Bonds	US Equity (LC)	US Equity (SC)	Int'l Dev. Equity	EM Equity	Real Estate	Broad Real Assets	Midstream Energy	HFoF Multi-Strat	Private Equity
Cash	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TIPS	0	1.00	0.76	0.47	0.58	0.29	0.34	0.68	0.05	0.02	0.12	0.16	0.25	0.56	0.17	0.14	-0.04
US Bond	0	0.76	1.00	0.35	0.55	0.29	0.30	0.94	0.19	0.10	0.15	0.03	0.21	0.20	0.09	0.08	-0.11
US Bonds - Dynamic	0	0.47	0.35	1.00	0.26	0.95	0.60	0.49	0.53	0.51	0.47	0.53	0.54	0.65	0.45	0.50	0.17
For. Dev. Bond	0	0.58	0.55	0.26	1.00	0.12	0.33	0.66	0.05	-0.03	0.37	0.12	0.11	0.25	0.09	0.04	-0.08
HY Bond	0	0.29	0.29	0.95	0.12	1.00	0.57	0.20	0.61	0.63	0.54	0.59	0.61	0.66	0.47	0.52	0.22
EM Bond	0	0.34	0.30	0.60	0.33	0.57	1.00	0.29	0.57	0.52	0.61	0.74	0.47	0.59	0.38	0.57	0.21
Global Bonds	0	0.68	0.94	0.49	0.66	0.20	0.29	1.00	0.09	-0.01	0.07	0.02	0.18	0.24	0.08	0.09	-0.10
US Equity (LC)	0	0.05	0.19	0.53	0.05	0.61	0.57	0.09	1.00	0.84	0.69	0.67	0.62	0.55	0.41	0.59	0.38
US Equity (SC)	0	0.02	0.10	0.51	-0.03	0.63	0.52	-0.01	0.84	1.00	0.62	0.66	0.70	0.57	0.40	0.62	0.38
Int'l Dev. Equity	0	0.12	0.15	0.47	0.37	0.54	0.61	0.07	0.69	0.62	1.00	0.71	0.50	0.55	0.36	0.58	0.35
EM Equity	0	0.16	0.03	0.53	0.12	0.59	0.74	0.02	0.67	0.66	0.71	1.00	0.47	0.56	0.33	0.67	0.30
Real Estate	0	0.25	0.21	0.54	0.11	0.61	0.47	0.18	0.62	0.70	0.50	0.47	1.00	0.75	0.32	0.35	0.21
Broad Real Assets	0	0.56	0.20	0.65	0.25	0.66	0.59	0.24	0.55	0.57	0.55	0.56	0.75	1.00	0.53	0.50	0.25
Midstream Energy	0	0.17	0.09	0.45	0.09	0.47	0.38	0.08	0.41	0.40	0.36	0.33	0.32	0.53	1.00	0.45	0.19
HFoF Multi-Strat	0	0.14	0.08	0.50	0.04	0.52	0.57	0.09	0.59	0.62	0.58	0.67	0.35	0.50	0.45	1.00	0.49
Private Equity	0	-0.04	-0.11	0.17	-0.08	0.22	0.21	-0.10	0.38	0.38	0.35	0.30	0.21	0.25	0.19	0.49	1.00



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# INDICES FOR PAST RETURN AND RISK METRICS

Indices used to generate historical risk and return metrics	Most Recent Index	Index Dates		Linked Index 1	Index Dates		Linked Index 2	Index Dates		Linked Index 2	Index Dates	
Cash	FTSE Treasury Bill 3 Mon USD	12/20	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
TIPS	BBgBarc US Treasury US TIPS TR USD	12/20	- 3/97	BBgBarc US Agg Bond TR USD	2/97	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
US Bond	BBgBarc US Agg Bond TR USD	12/20	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
US Bonds - Dynamic	BBgBarc US Agg Bond TR USD	12/20	- 2/90	BBgBarc US Agg Bond TR USD	1/90	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
For. Dev. Bond	50% CITI WGBI NonUSD Hdg 50% CITI WGBI NonUSD	12/20	- 1/85	BBgBarc US Agg Bond TR USD	12/84	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
HY Bond	BBgBarc US Corporate High Yield TR USD	12/20	- 7/83	BBgBarc US Agg Bond TR USD	6/83	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
EM Bond	JPM GBI-EM Global Diversified TR USD	12/20	- 1/03	JPM EMBI Global Diversified TR USD	12/02	- 1/94	BBgBarc US Corporate High Yield TR USD	12/93	- 7/83	BBgBarc US Agg Bond TR USD	6/83	- 1/79
Global Bonds	BBgBarc Global Aggregate TR Hdg USD	12/20	- 2/90	BBgBarc US Agg Bond TR USD	1/90	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
US Equity (LC)	S&P 500 TR USD	12/20	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
US Equity (SC)	Russell 2000 TR USD	12/20	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
Int'l Dev. Equity	MSCI EAFE GR USD	12/20	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
EM Equity	MSCI EM GR USD	12/20	- 1/88	MSCI EAFE GR USD	12/87	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
Real Estate	Wilshire US RESI TR USD	12/20	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
Broad Real Assets	*Custom Real Assets Index	12/20	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
Midstream Energy	Alerian MLP TR USD	12/20	- 1/96	BCH+AGG-CASH	12/95	- 1/91	GSCI+AGG-CASH	12/90	- 1/79	N.A.	N.A.	- N.A.
HFoF Multi-Strat	HFRI Fund of Funds Composite USD	12/20	- 1/90	HFN Hedge Fund Aggregate Average	12/89	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.
Private Equity	Cambridge PE 67% Buyout vs. 33% Venture	12/20	- 4/86	Russell 2000 TR USD	3/86	- 1/79	N.A.	N.A.	- N.A.	N.A.	N.A.	- N.A.

\*Custom Real Assets Index - Blended indices of 25% TIPS, 15% loans, 30% infra., 15% REITs & 15% Commod.

Note: Private Equity Index is frequently 3-6 months behind the other indices. For historical return calculation purposes, it is given 0% returns during the most recent period where gaps may exist.



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# DISCLOSURES

The historical performance information derived from the Frontier Engineer and used or presented in charts, tables, or graphs represent simulated historical performance, which has been derived by retroactively applying an asset allocation modeling process in its most recently developed form with its most recently derived ten- and twenty-year (forward-looking) capital market assumptions. Such historical return simulations (or back testing) was performed by simulating the combination of actual index returns for the historical period with a buy and hold strategy effective January 1, 1988 through the most recently available month-end date with simulated rebalancing occurring every month-end (with the reinvestment of dividends and capital gains from each index).

Back tested performance is hypothetical and does not reflect actual trades or actual client performance. As with all models, there are inherent limitations which are derived from the retroactive application developed with the benefit of hindsight, including the risk that certain factors such as material economic and market conditions could have contributed to materially different (either higher or lower) performance results than those depicted, or that certain material factors may have been included or excluded from consideration. As such, actual results during the applicable back tested period would have been different than those depicted.

The asset allocation modeling process currently used was initially developed in 2002 and was not offered as a strategy prior to that time. The output of a forward-looking model (or process) is a representation of allocation percentages among specific asset classes. Clients cannot invest directly in a target allocation, but rather, in underlying securities within designated asset classes. Advisor may change its models from time to time, and regularly updates its model as additional capital market assumption information becomes available or to increase or decrease relative weightings or emphasis on certain factors. Consequently, the Advisor may choose to deviate from a stated model over time as the model itself is revised, which could have a materially positive or negative impact on performance.

During the period represented, numerous modelling changes were made, including the regular changes in (ten- and twenty-year) forward-looking expected returns, expected volatilities, expected non-normal return distribution assumptions, as well as tracking-error assumptions and risk budgets. Furthermore, such assumptions can be modified client-by-client depending on certain preferences, priorities, constraints or unique considerations applicable to each client.

Other economic and market factors may have impacted decision-making when using the model to manage client funds, including the list of approved asset classes by a client or client type as well as any client-directed or Advisor implemented constraints.

All investments bear the risk of loss, including the loss of principal. Past performance, actual or hypothetical, is no guarantee of future results.

The returns displayed on the preceding pages are gross of fees. Actual performance would be reduced by investment advisory fees and other expenses that may be incurred in the management of the client's portfolio. The collection of fees produces a compounding effect on the total rate of return net of management fees. As an example, the effect of investment management fees on the total value of a client's portfolio assuming (a) quarterly fee assessment, (b) \$1,000,000 investment, (c) portfolio return of 8% a year, and (d) 0.50% annual investment advisory fee would be \$5,228 in the first year, and cumulative effects of \$30,342 over five years and \$73,826 over ten years. Additional information on advisory fees charged by DiMeo Schneider are described in Part 2 of the Form ADV.





# DISCLOSURES AND DEFINITIONS

## INDEX DEFINITIONS

- **FTSE Treasury Bill 3 Month** measures return equivalents of yield averages and are not marked to market. It is an average of the last three three-month Treasury bill month-end rates.
- **Bloomberg Barclays Capital US Treasury Inflation Protected Securities Index** consists of Inflation-Protection securities issued by the U.S. Treasury.
- **Bloomberg Barclays Muni 5 Year Index** is the 5-year (4-6) component of the Municipal Bond index.
- **Bloomberg Barclays High Yield Municipal Bond Index** covers the universe of fixed rate, non-investment grade debt.
- **Bloomberg Barclays U.S. Aggregate Index** covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.
- **FTSE World Government Bond Index (WGBI) (Unhedged)** provides a broad benchmark for the global sovereign fixed income market by measuring the performance of fixed-rate, local currency, investment-grade sovereign debt from over 20 countries,
- **FTSE World Government Bond Index (WGBI) (Hedged)** is designed to represent the FTSE WGBI without the impact of local currency exchange rate fluctuations.
- **Bloomberg Barclays US Corporate High Yield TR USD** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.
- **JP Morgan Government Bond Index-Emerging Market Index (GBI-EMI)** is a comprehensive, global local emerging markets index, and consists of regularly traded, liquid fixed-rate, domestic currency government bonds to which international investors can gain exposure.
- **JPMorgan EMBI Global Diversified** is an unmanaged, market-capitalization weighted, total-return index tracking the traded market for U.S.-dollar-denominated Brady bonds, Eurobonds, traded loans, and local market debt instruments issued by sovereign and quasi-sovereign entities.
- **MSCI ACWI** is designed to represent performance of the full opportunity set of large- and mid-cap stocks across multiple developed and emerging markets, including cross-market tax incentives.
- **The S&P 500** is a capitalization-weighted index designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.
- **Russell 3000** is a market-cap-weighted index which consists of roughly 3,000 of the largest companies in the U.S. as determined by market capitalization. It represents nearly 98% of the investable U.S. equity market.
- **Russell Mid Cap** measures the performance of the 800 smallest companies in the Russell 1000 Index.
- **Russell 2000** consists of the 2,000 smallest U.S. companies in the Russell 3000 index.
- **MSCI EAFE** is an equity index which captures large and mid-cap representation across Developed Markets countries around the world, excluding the US and Canada. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
- **MSCI Emerging Markets** captures large and mid-cap representation across Emerging Markets countries. The index covers approximately 85% of the free-float adjusted market capitalization in each country
- **The Wilshire US Real Estate Securities Index (Wilshire US RESI)** is comprised of publicly-traded real estate equity securities and designed to offer a market-based index that is more reflective of real estate held by pension funds.
- **Alerian MLP Index** is a float adjusted, capitalization-weighted index, whose constituents represent approximately 85% of total float-adjusted market capitalization, is disseminated real-time on a price-return basis (AMZ) and on a total-return basis.
- **Bloomberg Commodity Index (BCI)** is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight-caps are applied at the commodity, sector and group level for diversification.
- **Treasury Inflation-Protected Securities (TIPS)** are Treasury bonds that are indexed to inflation to protect investors from the negative effects of rising prices. The principal value of TIPS rises as inflation rises.
- **HFRI Fund of Funds Composite** is an equal-weighted index consisting of over 800 constituent hedge funds, including both domestic and offshore funds.
- **Cambridge Associates U.S. Private Equity Index (67% Buyout vs. 33% Venture)** is based on data compiled from more than 1,200 institutional-quality buyout, growth equity, private equity energy, and mezzanine funds formed between 1986 and 2015.
- **HFN Hedge Fund Aggregate Average** is an equal weighted average of all hedge funds and CTA/managed futures products reporting to the HFN Database. Constituents are aggregated from each of the HFN Strategy Specific Indices.
- **Goldman Sachs Commodity Index (GSCI)** is a broadly diversified, unleveraged, long-only composite index of commodities that measures the performance of the commodity market.

# Definitions & Disclosures

Please note: Due to rounding methodologies of various data providers, certain returns in this report might differ slightly when compared to other sources

## REGULATORY DISCLOSURES

**Offer of ADV Part 2A:** Rule 204-3 under the Investment Advisers Act of 1940 requires that we make an annual offer to clients to send them, without charge, a written disclosure statement meeting the requirements of such rule. We will be glad to send a copy of our ADV Part 2A to you upon your written request to [compliance@dimeoschneider.com](mailto:compliance@dimeoschneider.com).

## INDEX DEFINITIONS

- **Citigroup 3 Month T-Bill** measures monthly return equivalents of yield averages that are not marked to market. The Three-Month Treasury Bill Indexes consist of the last three three-month Treasury bill issues.
- **Ryan 3 Yr. GIC** is an arithmetic mean of market rates of \$1 million Guaranteed Interest Contracts held for three years.
- **Bloomberg Barclays Treasury U.S. T-Bills-1-3 Month Index** includes aged U.S. Treasury bills, notes and bonds with a remaining maturity from 1 up to (but not including) 3 months. It excludes zero coupon strips.
- **Bloomberg Barclays Capital US Treasury Inflation Protected Securities Index** consists of Inflation-Protection securities issued by the U.S. Treasury.
- **Bloomberg Barclays Muni Index** is a rules-based, market-value-weighted index engineered for the long-term tax-exempt bond market. Bonds must be rated investment-grade by at least two ratings agencies.
- **Bloomberg Barclays Muni 1 Year Index** is the 1 year (1-2) component of the Municipal Bond index.
- **Bloomberg Barclays Muni 3 Year Index** is the 3 year (2-4) component of the Municipal Bond index.
- **Bloomberg Barclays Muni 5 Year Index** is the 5 year (4-6) component of the Municipal Bond index.
- **Bloomberg Barclays Muni 7 Year Index** is the 7 year (6-8) component of the Municipal Bond index.
- **Bloomberg Barclays Intermediate U.S. Gov't/Credit** is the Intermediate component of the U.S. Government/Credit index, which includes securities in the Government and Credit Indices. The Government Index includes treasuries and agencies, while the credit index includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.
- **Bloomberg Barclays U.S. Aggregate Index** covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.
- **Bloomberg Barclays Global Aggregate ex. USD Indices** represent a broad-based measure of the global investment-grade fixed income markets. The two major components of this index are the Pan-European Aggregate and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds and Canadian government, agency and corporate securities.
- **Bloomberg Barclays U.S. Corporate High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.
- **JP Morgan Government Bond Index-Emerging Market (GBI-EM) Index** is a comprehensive, global local emerging markets index, and consists of regularly traded, liquid fixed-rate, domestic currency government bonds to which international investors can gain exposure.
- **The S&P 500** is a capitalization-weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.
- **The Dow Jones Industrial Index** is a price-weighted average of 30 blue-chip stocks that are generally the leaders in their industry.
- **The NASDAQ** is a broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market and Capital Market.
- **Russell 3000** is a market-cap-weighted index which consists of roughly 3,000 of the largest companies in the U.S. as determined by market capitalization. It represents nearly 98% of the investable U.S. equity market.
- **Russell 1000** consists of the largest 1000 companies in the Russell 3000 Index.
- **Russell 1000 Growth** measures the performance of those Russell 1000 companies with higher P/B ratios and higher forecasted growth values.
- **Russell 1000 Value** measures the performance of those Russell 1000 companies with lower P/B ratios and lower forecasted growth values.
- **Russell Mid Cap** measures the performance of the 800 smallest companies in the Russell 1000 Index.
- **Russell Mid Cap Growth** measures the performance of those Russell Mid Cap companies with higher P/B ratios and higher forecasted growth values.
- **Russell Mid Cap Value** measures the performance of those Russell Mid Cap companies with lower P/B ratios and lower forecasted growth values.
- **Russell 2000** consists of the 2,000 smallest U.S. companies in the Russell 3000 index.
- **Russell 2000 Growth** measures the performance of the Russell 2000 companies with higher P/B ratios and higher forecasted growth values.
- **Russell 2000 Value** measures the performance of those Russell 2000 companies with lower P/B ratios and lower forecasted growth values.
- **Russell 2500** consists of the 2,500 smallest U.S. companies in the Russell 3000 index.
- **Russell 2500 Growth** measures the performance of the Russell 2500 companies with higher P/B ratios and higher forecasted growth values.
- **Russell 2500 Value** measures the performance of those Russell 2500 companies with lower P/B ratios and lower forecasted growth values.
- **MSCI World** captures large and mid-cap representation across 23 Developed Markets countries. With 1,645 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
- **MSCI ACWI (All Country World Index) ex. U.S. Index** captures large and mid-cap representation across 22 of 23 Developed Markets countries (excluding the United States) and 23 Emerging Markets countries. With 1,859 constituents, the index covers approximately 85% of the global equity opportunity set outside the US.
- **MSCI ACWI (All Country World Index) ex. U.S. Small Cap Index** captures small cap representation across 22 of 23 Developed Markets countries (excluding the US) and 23 Emerging Markets countries. With 4,368 constituents, the index covers approximately 14% of the global equity opportunity set outside the US.
- **MSCI EAFE** is an equity index which captures large and mid-cap representation across Developed Markets countries around the world, excluding the US and Canada. With 930 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

- **MSCI EAFE Value** captures large and mid-cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the US and Canada. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. With 507 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI EAFE Index.
- **MSCI EAFE Growth** captures large and mid-cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the US and Canada. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend. With 542 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI EAFE Index.
- **MSCI Emerging Markets** captures large and mid-cap representation across 23 Emerging Markets countries. With 836 constituents, the index covers approximately 85% of the free-float adjusted market capitalization in each country.
- **Consumer Price Index** is a measure of prices paid by consumers for a market basket of consumer goods and services. The yearly (or monthly) growth rates represent the inflation rate.
- **FTSE NAREIT Equity REITs Index** contains all Equity REITs not designed as Timber REITs or Infrastructure REITs.
- **S&P Developed World Property** defines and measures the investable universe of publicly traded property companies domiciled in developed markets. The companies in the index are engaged in real estate related activities, such as property ownership, management, development, rental and investment.
- **S&P Developed World Property x U.S.** defines and measures the investable universe of publicly traded property companies domiciled in developed countries outside of the U.S. The companies included are engaged in real estate related activities, such as property ownership, management, development, rental and investment.
- **Bloomberg Commodity Index** is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight-caps are applied at the commodity, sector and group level for diversification.
- **HFRF Fund Weighted Composite Index** is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in US Dollar and have a minimum of \$50 Million under management or a twelve (12) month track record of active performance. The HFRF Fund Weighted Composite Index does not include Funds of Hedge Funds.
- **The Alerian MLP Index** is the leading gauge of energy Master Limited Partnerships (MLPs). The float adjusted, capitalization-weighted index, whose constituents represent approximately 85% of total float-adjusted market capitalization, is disseminated real-time on a price-return basis (AMZ) and on a total-return basis.
- **The Adjusted Alerian MLP Index** is commensurate with 65% of the monthly returns of the Alerian MLP Index to incorporate the effect of deferred tax liabilities incurred by MLP entities.
- **Cambridge Associates U.S. Private Equity Index** is based on data compiled from more than 1,200 institutional-quality buyout, growth equity, private equity energy, and mezzanine funds formed between 1986 and 2015.
- **Cambridge Associates U.S. Venture Capital Index** is based on data compiled from over 1,600 institutional-quality venture capital funds formed between 1986 and 2015.
- **Vanguard Spliced Bloomberg Barclays US1-5Yr Gov/Cr Flt Adj Index:** Bloomberg Barclays U.S. 1–5 Year Government/Credit Bond Index through December 31, 2009; Bloomberg Barclays U.S. 1–5 Year Government/Credit Float Adjusted Index thereafter.
- **Vanguard Spliced Bloomberg Barclays US5-10Yr Gov/Cr Flt Adj Index:** Bloomberg Barclays U.S. 5–10 Year Government/Credit Bond Index through December 31, 2009; Bloomberg Barclays U.S. 5–10 Year Government/Credit Float Adjusted Index thereafter.
- **Vanguard Spliced Bloomberg Barclays US Agg Flt Adj Index:** Bloomberg Barclays U.S. Aggregate Bond Index through December 31, 2009; Bloomberg Barclays U.S. Aggregate Float Adjusted Index thereafter.
- **Vanguard Spliced Bloomberg Barclays US Long Gov/Cr Flt Adj Index:** Bloomberg Barclays U.S. Long Government/Credit Bond Index through December 31, 2009; Bloomberg Barclays U.S. Long Government/Credit Float Adjusted Index thereafter.
- **Vanguard Balanced Composite Index:** Made up of two unmanaged benchmarks, weighted 60% Dow Jones U.S. Total Stock Market Index (formerly the Dow Jones Wilshire 5000 Index) and 40% Bloomberg Barclays U.S. Aggregate Bond Index through May 31, 2005; 60% MSCI US Broad Market Index and 40% Bloomberg Barclays U.S. Aggregate Bond Index through December 31, 2009; 60% MSCI US Broad Market Index and 40% Bloomberg Barclays U.S. Aggregate Float Adjusted Index through January 14, 2013; and 60% CRSP US Total Market Index and 40% Bloomberg Barclays U.S. Aggregate Float Adjusted Index thereafter.
- **Vanguard Spliced Intermediate-Term Tax-Exempt Index:** Bloomberg Barclays 1–15 Year Municipal Bond Index.
- **Vanguard Spliced Extended Market Index:** Dow Jones Wilshire 4500 Index through June 17, 2005; S&P Transitional Completion Index through September 16, 2005; S&P Completion Index thereafter.
- **Vanguard Spliced Value Index:** S&P 500 Value Index (formerly the S&P 500/Barra Value Index) through May 16, 2003; MSCI US Prime Market Value Index through April 16, 2013; CRSP US Large Cap Value Index thereafter.
- **Vanguard Spliced Large Cap Index:** Consists of MSCI US Prime Market 750 Index through January 30, 2013, and the CRSP US Large Cap Index thereafter.
- **Vanguard Spliced Growth Index:** S&P 500 Growth Index (formerly the S&P 500/Barra Growth Index) through May 16, 2003; MSCI US Prime Market Growth Index through April 16, 2013; CRSP US Large Cap Growth Index thereafter.
- **Vanguard Spliced Mid Cap Value Index:** MSCI US Mid Cap Value Index through April 16, 2013; CRSP US Mid Cap Value Index thereafter.
- **Vanguard Spliced Mid Cap Index:** S&P MidCap 400 Index through May 16, 2003; the MSCI US Mid Cap 450 Index through January 30, 2013; and the CRSP US Mid Cap Index thereafter.
- **Vanguard Spliced Mid Cap Growth Index:** MSCI US Mid Cap Growth Index through April 16, 2013; CRSP US Mid Cap Growth Index thereafter.
- **Vanguard Spliced Total Stock Market Index:** Dow Jones U.S. Total Stock Market Index (formerly known as the Dow Jones Wilshire 5000 Index) through April 22, 2005; MSCI US Broad Market Index through June 2, 2013; and CRSP US Total Market Index thereafter.
- **Vanguard Spliced Small Cap Value Index:** SmallCap 600 Value Index (formerly the S&P SmallCap 600/Barra Value Index) through May 16, 2003; MSCI US Small Cap Value Index through April 16, 2013; CRSP US Small Cap Value Index thereafter.
- **Vanguard Spliced Small Cap Index:** Russell 2000 Index through May 16, 2003; the MSCI US Small Cap 1750 Index through January 30, 2013; and the CRSP US Small Cap Index thereafter.
- **Vanguard Spliced Small Cap Growth Index:** S&P SmallCap 600 Growth Index (formerly the S&P SmallCap 600/Barra Value Index) through May 16, 2003; MSCI US Small Cap Growth Index through April 16, 2013; CRSP US Small Cap Growth Index thereafter.
- **Vanguard Spliced Total International Stock Index:** Consists of the Total International Composite Index through August 31, 2006; the MSCI EAFE + Emerging Markets Index through December 15, 2010; the MSCI ACWI ex USA IMI Index through June 2, 2013; and FTSE Global All Cap ex US Index thereafter. Benchmark returns are adjusted for withholding taxes.
- **Vanguard Spliced Developed Markets Index:** MSCI EAFE Index through May 28, 2013; FTSE Developed ex North America Index through December 20, 2015; FTSE Developed All Cap ex US Transition Index through May 31, 2016; FTSE Developed All Cap ex US Index thereafter. Benchmark returns are adjusted for withholding taxes.
- **Vanguard Spliced Emerging Markets Index:** Select Emerging Markets Index through August 23, 2006; MSCI Emerging Markets Index through January 9, 2013; FTSE Emerging Transition Index through June 27, 2013; FTSE Emerging Index through November 1, 2015; and FTSE Emerging Markets All Cap China A Transition Index thereafter. Benchmark returns are adjusted for withholding taxes.
- **Vanguard REIT Spliced Index:** MSCI US REIT Index adjusted to include a 2% cash position (Lipper Money Market Average) through April 30, 2009; MSCI US REIT Index through January 31, 2018; MSCI US Investable Market Real Estate 25/50 Transition Index through July 24, 2018; MSCI US Investable Market Real Estate 25/50 Index thereafter.

### **Additional:**

- Equity sector returns are calculated by Russell and MSCI for domestic and international markets, respectively. MSCI sector definitions correspond to the MSCI GICS® classification (Global Industry Classification System); Russell uses its own sector and industry classifications.
- MSCI country returns are calculated by MSCI, and are free float-adjusted market capitalization indices that are designed to measure equity market performance in each specific country.
- Currency returns are calculated using Bloomberg's historical spot rate indices and are calculated using the U.S. dollar as the base currency.
- The Index of Leading Economic Indicators, calculated by The Conference Board, is used as a barometer of economic activity over a range of three to six months. The index is used to determine the direction and stability of the economy. The composite index of leading indicators, which is derived from 10 leading indicators, helps to signal turning points in the economy and forecast economic cycles. The leading indicators are the following: average weekly hours, average weekly initial claims, manufacturers' new orders, both consumer and non-defense capital goods, vendor performance, building permits, stock prices, money supply (M2), the interest rate spread and the index of consumer expectations.
- S&P Target Date Indexes are constructed using a survey method of current target date investments with \$100 million or more in assets under management. Allocations for each vintage are comprised of exchange-traded-funds that represent respective asset classes used in target date portfolios. The indexes are designed to represent a market consensus glide path.

### **DEFINITION OF KEY STATISTICS AND TERMS**

- **Returns:** A percentage figure used when reporting historical average compounded rate of investment return. All returns are annualized if the period for which they are calculated exceeds one year.
- **Universe Comparison:** The universe compares the fund's returns to a group of other investment portfolios with similar investment strategies. The returns for the fund, the index and the universe percentiles are displayed. A percentile ranking of 1 is the best, while a percentile ranking of 100 is the worst. For example, a ranking of 50 indicates the fund outperformed half of the universe. A ranking of 25 indicates the fund was in the top 25% of the universe, outperforming 75%.
- **Returns In Up/Down Markets:** This measures how the fund performed in both up and down markets. The methodology is to segregate the performance for each time period into the quarters in which the market, as defined by the index, was positive and negative. Quarters with negative index returns are treated as down markets, and quarters with positive index returns are treated as up markets. Thus, in a 3 year or 12 quarter period, there might be 4 down quarters and 8 up quarters. A simple arithmetic average of returns is calculated for the fund and the index based on the up quarters. A simple arithmetic average of returns is calculated for the fund and the index based on the down quarters. The up market capture ratio is the ratio of the fund's return in up markets to the index. The down market capture ratio is the ratio of the fund's return in down markets to the index. Ideally, the fund would have a greater up market capture ratio than down market capture ratio.
- **Standard Deviation:** Standard deviation is a statistical measure of the range of performance within which the total returns of a fund fall. When a fund has a high standard deviation, the range of performance is very wide, meaning there is a greater volatility. Approximately 68% of the time, the total return of any given fund will differ from the average total return by no more than plus or minus the standard deviation figure. Ninety-five percent of the time, a fund's total return will be within a range of plus or minus two times the standard deviation from the average total return. If the quarterly or monthly returns are all the same the standard deviation will be zero. The more they vary from one another, the higher the standard deviation. Standard deviation can be misleading as a risk indicator for funds with high total returns because large positive deviations will increase the standard deviation without a corresponding increase in the risk of the fund. While positive volatility is welcome, negative is not.
- **R-Squared:** This reflects the percentage of a fund's movements that are explained by movements in its benchmark index. An R-squared of 100 means that all movements of a fund are completely explained by movements in the index. Conversely, a low R-squared indicates very few of the fund's movements are explained by movements in the benchmark index. R-squared can also be used to ascertain the significance of a particular beta. Generally, a higher R-squared will indicate a more reliable beta figure. If the R-squared is lower, then the beta is less relevant to the fund's performance. A measure of diversification, R-squared indicates the extent to which fluctuations in portfolio returns are explained by market. An R-squared = 0.70 implies that 70% of the fluctuation in a portfolio's return is explained by the fluctuation in the market. In this instance, overweighting or underweighting of industry groups or individual securities is responsible for 30% of the fund's movement.
- **Beta:** This is a measure of a fund's market risk. The beta of the market is 1.00. Accordingly, a fund with a 1.10 beta is expected to perform 10% better than the market in up markets and 10% worse than the market in down markets. It is important to note, however, a low fund beta does not imply the fund has a low level of volatility; rather, a low beta means only that the fund's market-related risk is low. Because beta analyzes the market risk of a fund by showing how responsive the fund is to the market, its usefulness depends on the degree to which the markets determine the fund's total risk (indicated by R-squared).
- **Alpha:** The Alpha is the nonsystematic return, or the return that can't be attributed to the market. It can be thought of as how the manager performed if the market's return was zero. A positive alpha implies the manager added value to the return of the portfolio over that of the market. A negative alpha implies the manager did not contribute any value over the performance of the market.
- **Sharpe Ratio:** The Sharpe ratio is the excess return per unit of total risk as measured by standard deviation. Higher numbers are better, indicating more return for the level of risk experienced. The ratio is a fund's return minus the risk-free rate of return (30-day T-Bill rate) divided by the fund's standard deviation. The higher the Sharpe ratio, the more reward you are receiving per unit of total risk. This measure can be used to rank the performance of mutual funds or other portfolios.
- **Treynor Ratio:** The Treynor ratio measures returns earned in excess of that which could have been earned on a riskless investment per each unit of market risk. The ratio relates excess return over the risk-free rate to the additional risk taken; however, systematic risk is used instead of total risk. The Treynor ratio is similar to the Sharpe ratio, except in the fact that it uses the beta to evaluate the returns rather than the standard deviation of portfolio returns. High values mean better return for risk taken.
- **Tracking Error:** Tracking error measures the volatility of the difference in annual returns between the manager and the index. This value is calculated by measuring the standard deviation of the difference between the manager and index returns. For example, a tracking error of +/- 5 would mean there is about a 68% chance (1 standard deviation event) that the manager's returns will fall within +/- 5% of the benchmark's annual return.
- **Information Ratio:** The information ratio is a measure of the consistency of excess return. This value is determined by taking the annualized excess return over a benchmark (style benchmark by default) and dividing it by the standard deviation of excess return.
- **Consistency:** Consistency shows the percent of the periods the fund has beaten the index and the percent of the periods the index has beat the fund. A high average for the fund (e.g. over 50) is desirable, indicating the fund has beaten the index frequently.
- **Downside Risk:** Downside risk is a measure similar to standard deviation but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. The higher the factor, the riskier the product.
- **M-Squared:** M-squared, or the Modigliani risk-adjusted performance measure is used to characterize how well a portfolio's return rewards an investor for the amount of risk taken, relative to that of some benchmark portfolio and to the risk-free rate.

## DEFINITION OF KEY PRIVATE EQUITY TERMS

- **PIC (Paid in Capital):** The amount of committed capital that has been transferred from the limited partner to the general partner.
- **TVPI (Total Value to Paid in Capital):** Money returned to limited partners plus the fund's unrealized investments, divided by money paid-in to the partnership. The TVPI should equal RVPI plus DPI.
- **DPI (Distribution to Paid In Capital):** Money returned (distributions) to limited partners divided by money paid in to the partnership. Also called cash-on-cash multiple.
- **RVPI (Residual Value to Paid In Capital):** The value of a fund's unrealized investments divided by money paid-in to the partnership.
- **Internal rate of return (IRR):** This is the most appropriate performance benchmark for private equity investments. It is a time-weighted return expressed as a percentage. IRR uses the present sum of cash drawdowns (money invested), the present value of distributions (money returned from investments) and the current value of unrealized investments and applies a discount.
- **Commitment:** Every investor in a private equity fund commits to investing a specified sum of money in the fund partnership over a specified period of time. The fund records this as the limited partnership's capital commitment. The sum of capital commitments is equal to the size of the fund.
- **Capital Distribution:** These are the returns that an investor in a private equity fund receives. It is the income and capital realized from investments less expenses and liabilities. Once a limited partner has had their cost of investment returned, further distributions are actual profit. The partnership agreement determines the timing of distributions to the limited partner. It will also determine how profits are divided among the limited partners and general partner.
- **Carried Interest:** The share of profits that the fund manager is due once it has returned the cost of investment to investors. Carried interest is normally expressed as a percentage of the total profits of the fund.
- **Co-Investment:** Co-Investments are minority investments made alongside a private equity investor in an LBO, a recapitalization or an expansion capital transaction. It is a passive, non-controlling investment, as the private equity firm involved will typically exercise control and perform monitoring functions.
- **General Partner (GP):** This can refer to the top-ranking partners at a private equity firm as well as the firm managing the private equity fund.
- **GP Commitments:** It is normal practice for the GP managing a private equity fund to also make a financial commitment to the fund on the same basis as the LPs in the fund, and this is seen as an important factor driving the alignment of GP and LP interests. The historic benchmark for GP commitments has been 1% of the total fund size, but this is by no means universal, and many GPs commit significantly larger amounts. Furthermore, there has been a marked trend towards GPs making larger commitments to their funds over recent years.
- **Leveraged Buy-Out (LBO):** The acquisition of a company using debt and equity finance.
- **Limited Partner (LP):** Institutions or high-net-worth individuals/sophisticated investors that contribute capital to a private equity fund.
- **Public Market Equivalent (PME):** Performance measure used to evaluate performance relative to the market. It is calculated as the ratio of the discounted value of the LP's inflows divided by the discounted value of outflows, with the discounting performed using realized market returns.
- **Primaries:** An original investment vehicle that invests directly into a company or asset.

## VALUATION POLICY

DiMeo Schneider does not engage an independent third party pricing service to value securities. Our reports are generated using the security prices provided by custodians used by our clients. Our custodial pricing hierarchy is available upon request. If a client holds a security not reported by the first custodian within the hierarchy, the valuation is generated from the next custodian within the hierarchy, and so forth. Each custodian uses pricing services from outside vendors, where the vendors may generate nominally different prices. Therefore, this report can reflect minor valuation differences from those contained in a custodian's report. In rare instances where DSA overrides a custodial price, prices are taken from Bloomberg.

## REPORTING POLICY

This report is intended for the exclusive use of the client listed within the report. Content is privileged and confidential. Any dissemination or distribution is strictly prohibited. Information has been obtained from a variety of sources believed to be reliable though not independently verified. Any forecast represents median expectations and actual returns, volatilities and correlations will differ from forecasts. Please note each client has customized investment objectives and constraints and the investment strategy for each portfolio is based on a client-specific asset allocation model. Past performance does not indicate future performance and there is a possibility of a loss. Performance calculated net of investment fees. Certain portfolios presented may be gross of DiMeo Schneider's fees and actual performance would be reduced by investment advisory fees. This report does not represent a specific investment recommendation. Please consult with your advisor, attorney and accountant, as appropriate, regarding specific advice.

Custodian reports are the reports that govern the account. There will be different account values between DiMeo Schneider's reports and the custodian reports based on whether the report utilizes trade date or settlement date to calculate value. Additionally, difference between values contained on reports may be caused by different accrued income values. Any forecasts represent future expectations and actual returns, volatilities and correlations will differ from forecasts. This report does not represent a specific investment recommendation. Please consult with your advisor, attorney and accountant, as appropriate, regarding specific advice. Past performance does not indicate future performance and there is a possibility of a loss.

Manager performance for mutual funds and ETFs is based on NAV and provided by Lipper. Performance for non-mutual fund or ETF investments is based on the returns provided by managers, calculations based on a manager statement, or calculations based on a statement or data from the client's custodian. Unless specified otherwise, all returns are net of individual manager fees, represent total returns and are annualized for periods greater than one year. The deduction of fees produces a compounding effect that reduces the total rate of return over time. As an example, the effect of investment management fees on the total value of a client's portfolio assuming (a) quarterly fee assessment, (b) \$1,000,000 investment, (c) portfolio return of 8% a year, and (d) 0.50% annual investment advisory fee would be \$5,228 in the first year, and cumulative effects of \$30,342 over five years and \$73,826 over ten years. Additional information on advisory fees charged by DiMeo Schneider are described in Part 2 of the Form ADV.

## **OTHER**

By regulation, closed-end funds utilizing debt for leverage must report their interest expense, as well as their income tax expense, as part of their total expense ratio. To make for a useful comparison between closed-end funds and both open-end funds and exchange-traded funds, adjusted expense ratios excluding interest and income tax expenses are utilized for closed-end funds within this report. See disclosure on closed-end fund fact sheets for information regarding the total expense ratio of each closed-end fund.

Please advise us of any changes in your objectives or circumstances.

## **CUSTODIAN STATEMENTS**

Please remember to review the periodic statements you receive from your custodian. If you do not receive periodic statements from your custodian, or notice issues with the activity reported in those statements, please contact DSA or your custodian immediately.

## **YEAR END FIRM UPDATE DISCLOSURES**

Barron's Institutional Consulting Teams ranking is based on quantitative and qualitative factors including team's assets, revenue, size and character of the team itself. Barron's invites firms that, in their opinion, are competitive given size and sophistication. There is no fee associated with participating in the ranking. DiMeo Schneider's ranking took into consideration the combined capabilities of the firm and its subsidiary, Fiduciary Investment Advisors, LLC.

P&I's 2020 Best Places to Work in Money Management ranking is a proprietary survey produced by Pension & Investment in partnership with Best Companies Group. 94 companies were recognized in 2020 and results are based on evaluating each nominated company's workplace policies, practices, philosophy, systems and demographics, as well as an employee survey to measure employee experience. DiMeo Schneider's rankings are representative of the firm and its subsidiary, Fiduciary Investment Advisors, LLC. There is no fee associated with participating in the ranking.

P&I's Consultant Ranking is a proprietary survey produced by Pension & Investment. Results are based on 80 questionnaire responses sent to 213 consultants determined by P&I that self-reported institutional assets under advisement as of June 30, 2020. Consultants with multiple subsidiaries are asked to provide information on a consolidated basis. There is no fee associated with participating in the ranking. The ranking is not indicative of DiMeo Schneider's future performance.