

**TOWN OF TRUMBULL  
PENSION BOARD  
Meeting**

In accordance with Sec. 1-19 of the General Statutes Right-to-Know Law, the Pension Board will have a meeting on Tuesday, April 25, 2023 at 7:00 P.M. at the Town Hall.

**A G E N D A**

Call to Order

Investment Update – 1st Quarter – Beirne Wealth Consulting

Approval of Pension Benefits

Jose Negron	02/01/2023	\$3,279.39
Susan Collins	1/1/2023	1,970.96
Deborah Iannuzzi	1/1/2023	1,308.08
Jacqueline Smigel	5/1/2023	709.34
Craig Schneider	2/1/2023	1,757.93
Karen Coulter	3/1/2023	182.49
Evelyn Zamary	2/1/2023	1,337.79

Annual First Selectman's Letter 2022 – Review Completed letter

Approval of Minutes – January 24, 2023

Adjournment

REPORT PREPARED FOR:



**BW** Beirne Wealth Consulting  
Services, LLC

Your Strategic Partner for Defined Benefit Plans  
**Month Ending 3/31/2023**

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Periods Ending 03/31/23

Name	1 Month	Last 3 Months	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years
<b>US Equity</b>								
Russell 3000 Index	2.7	7.2	-8.6	18.5	10.5	11.7	9.9	11.4
S&P 500 Index	3.7	7.5	-7.7	18.6	11.2	12.2	10.1	12.0
Russell 1000 Index	3.2	7.5	-8.4	18.6	10.9	12.0	10.0	11.8
Russell 1000 Growth Index	6.8	14.4	-10.9	18.6	13.7	14.6	12.1	10.4
Russell 1000 Value Index	-0.5	1.0	-5.9	17.9	7.5	9.1	7.7	12.6
Russell Midcap Index	-1.5	4.1	-8.8	19.2	8.1	10.1	9.5	12.1
Russell 2000 Index	-4.8	2.7	-11.6	17.5	4.7	8.0	8.1	8.3
Russell 2000 Growth Index	-2.5	6.1	-10.6	13.4	4.3	8.5	8.7	4.8
Russell 2000 Value Index	-7.2	-0.7	-13.0	21.0	4.5	7.2	7.2	11.5
<b>International Equity</b>								
MSCI AC World Index	3.2	7.4	-7.0	15.9	7.5	8.6	6.6	-
MSCI AC World ex USA	2.5	7.0	-4.6	12.3	3.0	4.7	3.1	-
MSCI EAFE Index	2.6	8.6	-0.9	13.5	4.0	5.5	3.5	9.7
MSCI Emerging Markets Index	3.1	4.0	-10.3	8.2	-0.5	2.4	2.0	-
<b>Fixed Income</b>								
90 Day U.S. Treasury Bill	0.4	1.1	2.5	0.9	1.4	0.9	0.7	5.9
Blmbg. U.S. Aggregate	2.5	3.0	-4.8	-2.8	0.9	1.4	2.7	9.5
Blmbg. U.S. Gov't/Credit	2.8	3.2	-4.8	-2.6	1.2	1.5	2.8	9.4
Bloomberg U.S. Municipal Bond Index	2.2	2.8	0.3	0.3	2.0	2.4	3.6	8.5
Blmbg. U.S. Corp: High Yield Index	1.1	3.6	-3.3	5.9	3.2	4.1	6.6	-
<b>Real Estate</b>								
FTSE NAREIT All REITs Index	-2.1	1.5	-19.8	10.3	5.7	6.1	6.6	8.6
NCREIF Property Index	-	-	-	-	-	-	-	7.7
<b>Alternatives</b>								
HFRI Fund of Funds Composite Index	-0.7	0.7	-1.9	7.2	3.1	3.2	2.1	-
<b>Inflation</b>								
CPI - All Urban Consumers (SA)	0.1	0.9	5.0	5.3	3.9	2.7	2.3	3.2

**Total Plan**

March 31, 2023

	BMV \$	NCF \$	EMV (\$)	% of Portfolio	Month	Quarter	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Plan</b>	45,360,111	-481,889	45,397,764	100.00	1.14	3.75	-5.54	9.64	4.61	5.94	5.90	Jul-08
<i>Blended Benchmark</i>					2.54	5.69	-6.05	10.22	6.01	6.97	6.63	
<i>60% MSCI ACWI/40% BC Agg</i>					2.87	5.57	-6.14	8.02	4.81	5.57	5.21	
<b>Total Equity</b>	<b>24,620,736</b>	<b>-7,776</b>	<b>24,962,729</b>	<b>54.99</b>	<b>1.42</b>	<b>5.48</b>	<b>-7.59</b>	<b>16.33</b>	<b>6.50</b>	<b>-</b>	<b>9.05</b>	<b>Jul-16</b>
<b>Domestic Equities</b>	<b>17,926,062</b>	<b>-6,334</b>	<b>18,042,228</b>	<b>39.74</b>	<b>0.68</b>	<b>4.67</b>	<b>-8.66</b>	<b>18.47</b>	<b>8.23</b>	<b>-</b>	<b>10.01</b>	<b>Jul-16</b>
Vanguard Institutional Index(VINIX)	8,494,463	-	8,806,016	19.40	3.67	7.49	-7.77	18.57	11.16	12.21	13.00	Nov-09
<i>S&amp;P 500 Index</i>					3.67	7.50	-7.73	18.60	11.19	12.24	13.02	
iShares Russell 1000 Value ETF(IWD)	1,276,789	-6,334	1,263,758	2.78	-0.52	0.91	-6.19	-	-	-	11.30	Sep-20
<i>Russell 1000 Value Index</i>					-0.46	1.01	-5.91	-	-	-	11.54	
Diamond Hill Large Cap(DHLYX)	2,710,267	-	2,627,392	5.79	-3.06	-0.72	-10.96	17.33	8.03	10.20	10.27	Apr-11
<i>Russell 1000 Value Index</i>					-0.46	1.01	-5.91	17.93	7.50	9.13	9.52	
AQR Large Cap Multi-Sytle(QCELX)	1,731,896	-	1,753,464	3.86	1.25	5.45	-8.34	18.74	-	-	9.12	Dec-18
<i>Russell 1000 Index</i>					3.16	7.46	-8.39	18.55	-	-	11.26	
Vanguard Mid Cap Index Adm(VIMAX)	1,350,578	-	1,335,514	2.94	-1.12	3.87	-9.89	18.73	8.13	-	9.49	Jan-17
<i>CRSP U.S. Mid Cap TR Index</i>					-1.11	3.87	-9.85	18.75	8.15	-	9.52	
Vanguard Small-Cap Index Fund Adm(VSMAX)	1,355,033	-	1,306,145	2.88	-3.61	3.74	-9.38	19.65	6.75	-	7.89	Jan-17
<i>CRSP U.S. Small Cap TR Index</i>					-3.63	3.71	-9.39	19.63	6.74	-	7.88	
AQR Small Cap Multi-Sytle(QSMLX)	1,007,037	-	949,940	2.09	-5.67	1.27	-10.05	21.91	-	-	6.60	Dec-18
<i>Russell 2000 Index</i>					-4.78	2.74	-11.61	17.51	-	-	5.19	
<b>International Equities</b>	<b>6,694,674</b>	<b>-1,442</b>	<b>6,920,500</b>	<b>15.24</b>	<b>3.40</b>	<b>7.67</b>	<b>-4.81</b>	<b>11.90</b>	<b>2.60</b>	<b>-</b>	<b>6.86</b>	<b>Jul-16</b>
American Funds EuroPacific Growth(ERGPX)	3,121,370	-	3,266,917	7.20	4.66	9.87	-3.25	12.13	3.25	5.99	6.11	Nov-09
<i>MSCI AC World ex USA Growth</i>					4.68	8.69	-6.03	9.81	3.71	5.45	5.96	
AQR International Multi-Style(QICLX)	1,550,703	-	1,580,700	3.48	1.93	8.60	-0.73	14.44	-	-	6.38	Dec-18
<i>MSCI AC World ex USA</i>					2.55	7.00	-4.56	12.32	-	-	5.64	
Vanguard Emerging Markets(VWO)	2,022,601	-1,442	2,072,884	4.57	2.56	3.72	-8.99	9.52	-	-	3.47	Dec-18
<i>FTSE Emerging Mkts All Cap China A Inclusion Index</i>					2.29	3.11	-9.79	9.87	-	-	3.96	

## Total Plan

	BMV \$	NCF \$	EMV (\$)	% of Portfolio	Month	Quarter	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Fixed Income</b>	<b>8,606,546</b>	<b>194,104</b>	<b>8,952,342</b>	<b>19.72</b>	<b>1.73</b>	<b>2.83</b>	<b>-4.26</b>	<b>-0.47</b>	<b>0.81</b>	<b>-</b>	<b>1.20</b>	<b>Jul-16</b>
Western Asset Core Plus Bond(WAPSX)	2,001,838	-	2,047,748	4.51	2.29	3.40	-7.96	-2.65	0.18	-	1.56	Nov-14
<i>Blmbg. U.S. Aggregate</i>					2.54	2.96	-4.78	-2.77	0.90	-	1.25	
Vanguard Total Bond Market Index(VBTLX)	2,065,278	-	2,118,401	4.67	2.57	3.16	-4.71	-2.80	-	-	1.08	Dec-18
<i>Blmbg. U.S. Aggregate</i>					2.54	2.96	-4.78	-2.77	-	-	1.12	
Golub Capital BDC 4, Inc.(\$1 mill)	50,000	-327	50,000	0.11	0.66	0.66	-	-	-	-	2.35	Dec-22
<i>Blmbg. U.S. Aggregate</i>					2.54	2.96	-	-	-	-	2.50	
PIMCO Income Instl(PIMIX)	4,334,620	-	4,386,952	9.66	1.21	2.56	-1.47	3.58	2.24	-	2.19	Feb-18
<i>Blmbg. U.S. Universal Index</i>					2.35	2.93	-4.61	-2.02	1.05	-	0.93	
Greywolf Opportunities Offshore Fund II, LP(\$1 mill)	154,810	144,934	299,744	0.66	0.00	0.00	-	-	-	-	-0.46	Oct-22
<i>Blmbg. U.S. Corp: High Yield Index</i>					1.07	3.57	-	-	-	-	7.89	
Silver Point Specialty Credit Fund III, LP	-	49,497	49,497	0.11	-	-	-	-	-	-	-	Mar-23
<i>HFRI RV: Fixed Income-Corporate Index</i>					-0.57	-	-	-	-	-	-0.46	
<b>Inflation Protection &amp; Alternatives</b>	<b>6,366,547</b>	<b>-</b>	<b>6,366,547</b>	<b>14.02</b>	<b>0.00</b>	<b>0.00</b>	<b>3.48</b>	<b>5.44</b>	<b>7.59</b>	<b>-</b>	<b>6.75</b>	<b>Dec-16</b>
Boyd Watterson GSA Fund, LP(\$2 mill)	2,120,510	-	2,120,510	4.67	0.00	0.00	2.89	6.01	-	-	6.26	Jan-19
Boyd Diversified Government REIT, Inc.(\$2 mill)	2,056,065	-	2,056,065	4.53	0.00	0.00	-	-	-	-	2.80	Sep-22
Boyd Watterson State Govt Fund, LP(\$750K)	840,372	-	840,372	1.85	0.00	0.00	4.04	7.43	-	-	8.28	Jun-19
Longford Capital Fund II, LP (\$2 million)	902,720	-	902,720	1.99	0.00	0.00	-3.99	-0.32	7.20	-	-0.35	Jul-17
Longford Capital Fund III, LP (\$2 million)	446,880	-	446,880	0.98	0.00	0.00	19.23	2.21	-	-	2.21	Apr-20
<b>Cash &amp; Equivalents</b>	<b>5,766,281</b>	<b>-668,217</b>	<b>5,116,146</b>	<b>11.27</b>	<b>0.32</b>	<b>0.95</b>	<b>1.95</b>	<b>0.69</b>	<b>1.27</b>	<b>-</b>	<b>1.17</b>	<b>Jul-16</b>
Allspring Gov MMKT(GVIXX)	5,766,281	-668,217	5,116,146	11.27	0.32	0.95	1.95	0.69	1.27	0.80	0.60	Nov-09
<i>90 Day U.S. Treasury Bill</i>					0.43	1.07	2.50	0.89	1.41	0.86	0.68	

Blended Benchmark = BBgBarc US Aggregate TR 32.5% / S&P 500 25% / Russell 1000 Growth 8% / Russell 1000 Value 8% / Russell 2000 5.3% / MSCI ACWI ex USA 21.3%

Approx. 15% of the portfolio is unvalued as of 3/31 and is also only valued quarterly.

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A "since inception" return, if reported, begins with the first full month after funding, although actual inception dates (e.g., the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

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

## 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.
- 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.
- HFRI 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 HFRI 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.



## DEFINITION OF KEY STATISTICS AND TERMS

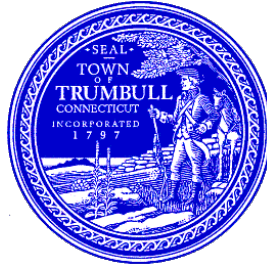
- Returns: A percentage figure used when reporting historical average compounded rate of investment return. All returns are annualized if the period for which they are calculated exceeds one year.
- Universe Comparison: The universe compares the fund's returns to a group of other investment portfolios 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 cannot 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.
- 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.
- 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.

**Town of Trumbull Pension Board Approvals**  
**April 25, 2023**

Name	Address	Credited Svc. Yrs.	Retirement Date	Payment Date	Pension Amount	Option Selected **	Termination Date	Payout a/o Date	Contribution Plus Interest Refund (GROSS)
Jose Negron	2309 Fairfield Avenue Bridgeport, CT 06605	30 (34)	1/6/2023	02/01/2023	3,279.39	3			
Susan Collins	7 Tamashua Drive Trumbull, CT 06611	19	12/30/2022	1/1/2023	1,970.96	1			
Deborah Iannuzzi	38 Pine Street Trumbull, CT 06611	24	12/30/2022	1/1/2023	1,308.08	2			
Jacqueline Smigel	5004 Thomas Drive Unit 2311 Panama City Beach, FL 32408	16	10/1/2021	5/1/2023	709.34	1			
Craig Schneider	120 Huntington Turnpike Unit 803 Bridgeport, CT	16	1/20/2023	2/1/2023	1,757.93	1			
Karen Coulter	36 Reading Road Trumbull, CT 06611	6	4/30/2002	3/1/2023	\$182.49	1			
Evelyn Zmary	39 Mayflower Drive Trumbull, CT 06611	16	1/17/2023	2/1/2023	\$1,337.79	1			
** Optional Forms of Payment Defined:									

- Option 1: Life Income with 10 Years Certain: The normal form of payment of a participant's normal retirement benefit is a ten year certain and life annuity. This benefit will be paid monthly for the life of the participant provided, however, that if the participant dies before receiving 120 monthly payments, the balance of the 120 monthly payments will be paid to his or her designated beneficiary.
  
- Option 2: Joint and 100% Survivor Annuity: An actuarially equivalent reduced monthly benefit payable to the the participant for his or her life with the provision that, upon the participant's death, 100% of the monthly amount paid to the participant during his or her life will be paid monthly to the participant's surviving joint annuitant (spouse) for the remainder of his or her life.
  
- Option 3: Joint and 66-2/3% Survivor Annuity: An actuarially equivalent reduced monthly benefit payable to the the participant for his or her life with the provision that, upon the participant's death, 66- 2/3% of the monthly amount paid to the participant during his or her life will be paid monthly to the participant's surviving joint annuitant (spouse) for the remainder of his or her life.
  
- Option 4: Social Security Option. Early retirement option that is a 10 year certain and life annuity. You collect a greater amount until you reach retirement age and then you receive a lesser amount when you are eligible to collect social security. The two payments are actuarily determined so the re as uniform as

**PENSION  
BOARD**



**Town Hall**  
5866 Main Street  
Trumbull, Connecticut 06611

Date: April 25, 2023  
To: Vicki A. Tesoro, First Selectman  
Subject: Pension Board Update

Below is a brief update on the performance, activities and initiatives for calendar year ending 2022.

**Executive Summary:**

(All numbers calendar year based)

- Beirne Wealth Consulting, LLC, (Beirne) provided investment advice to the Pension Board from 2017 through 2022.
- The biennial Actuarial Valuation as of July 1, 2022, was completed.
- Net cash flows for calendar year 2022 were positive as they were from 2015 through 2021.
- The fund returned a loss of 13.45% for 2022. This compares with the U.S. public pensions reported median returns of -14.1% as reported by Investor Force Public DB Net Universe.
- The funded ratio was 48%, as of the July 1, 2022 actuarial valuation. It has continued to improve every year since 2014 when it was 35%.
- We continue to receive regular "flash reports" on how investments are performing and follow an annual governance calendar to guide quarterly meeting agendas.

An Investment Policy Statement is in effect and the Board reviews it annually. This year the Board modified the Investment Policy to allow the total allocation to Inflation Protection & Alternatives assets to as a high as 20% from the current limit of 10%. No other changes to the investment policy were made at this time.

**Pension Investments:**

The Investment returns for 2022 realized a loss of 13.45% which was higher than the assumed return rate of 7.25%; the annualized 3 and 5-year results for this same period were 2.42% and 3.60% respectively.

Calendar Year	2022	2021	2020	2019	2018
Investment Performance	(13.45%)	12.70%	10.09%	18.76%	(6.62%)
Plans Assets (millions)	\$42.5	\$50.9	\$43.8	\$ 40.4	\$33.5
Town Contributions					\$ 5.1
a. Current					\$ 1.0
b. Make-up	\$4.0	\$5.3	\$5.3 (total)	\$5.6 (total)	\$ 4.1
Employee Contributions	\$1.0	\$ .8	\$ .9	\$ 0.9	\$1.0
Less: Payments	\$6.3	6.0	\$5.7	\$ 5.8	\$5.5
Net Cash Flow (thousands)	(\$1.4)	\$1.04	\$511	\$ 622	\$541

Each quarter, the Pension Board along with the investment consultant reviews how the investment managers performed. We continue to review investments with our advisor and make changes to enhance investment returns with an acceptable level of risk.

The following changes in investments were made by the Pension Board, based on the recommendations of Beirne, during 2022:

- Allocated \$1 M to Golub Capital
- Allocated \$1 M to Greywold Opportunities Offshore fund
- Allocated \$1 M to Silver Point Capital

### Actuarial Report:

USI, the Plan actuary, performed the biennial valuation as of July 1, 2022. See chart below for previous valuation results:

	July 1, 2022	July 1, 2020	July 1, 2018	July 1, 2016
Participants				
Active	263	322	365	406
Deferred Vested	85	78	72	79
Receiving Benefits	<u>400</u>	<u>381</u>	<u>372</u>	<u>355</u>
Total	748	781	809	840
Total Liabilities	\$99,472,897	\$90,959,094	\$85,295,652	\$80,087,551
Actuarial Value of Assets	\$47,710,223	\$40,676,176	\$35,032,614	\$30,705,246
Funded Status (unfunded)	(\$51,762,674)	\$(50,282,918)	(\$50,263,038)	(\$49,382,305)
Funded Ratio	48.0%	44.7%	41.1%	38.3%

**Operations:**

The Pension Board continued its quarterly schedule of meetings with special meetings, as needed.

The following governance schedule indicates the items reviewed at quarterly meetings, as required:

- Portfolio Investment Review and Market Environment Overview
- Administrative Fee and Portfolio Expense Analysis
- Investment Policy Review
- Legislative Update (as needed)
- Actuarial Review (biennial report)\*
- Market Environment

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

For the 2022 actuarial valuation, the Board approved the implementation of the 2020 mortality tables utilizing scale MP-2021. In addition, they also approved the change to the asset valuation smoothing method from recognizing gains or losses over 3 year to 5 years.

There were no changes to the Pension Board membership during 2022.

The Pension Board understands the need for the administration to weigh all town financial concerns and it appreciates the ongoing support for the Retirement Plan. We welcome the opportunity to meet with you and accept ideas and recommendations for improvement.

Respectfully submitted,

The Pension Board

Patrick Clark  
Chairman

Anthony Musto

Maria Pires

Donna Pellitteri

James Daly

James Meisner  
Secretary

Eric Paulson

**Subject to Modification and Approval  
Unapproved Minutes  
TOWN OF TRUMBULL  
Pension Board  
January 24, 2023**

**Call to Order**

Chairman Patrick Clark called the Pension Board meeting to order at 7:03 p.m. in the Town Hall.

**PRESENT**

James Daly  
Donna Pellitteri  
James Meisner  
Patrick Clark  
Eric Paulson (arrived 7:10 p.m.)  
Maria Pires

**ABSENT**

Anthony Musto

Also present: John Oliver Beirne and Lindsey Allard – Beirne Wealth Consulting

**Election of Officers**

Mr. Clark ask for nominations for the positions of Chairman and Secretary.

Ms. Pires moved, seconded by Ms. Pellitteri, to re-elect Mr. Clark as Chairman and Mr. Meisner as Secretary.

There was no discussion.

Vote: 5-0-0 motion carried

**Actuarial Valuation Update – Maria Pires, Finance Director**

Ms. Pires reviewed the **Summary of Results** in the Actuarial Valuation dated July 1, 2022 that was prepared by Brad Fischer of USI.

- At the last meeting, the Board approved to change the Mortality Table assumption and keep the assumed Interest rate the same at 7.25%.
- The Funded Ratio is now 48% and the ADC for next year is \$5.613 million.

**Investment Update – 4<sup>th</sup> Quarter – Beirne Wealth Consulting**

The Plan ended the 4<sup>th</sup> quarter +6.71 for the quarter with \$42.5 million in assets up from \$41.2 million in September. The Fund leads the benchmark by 2.4%

**Approval of Pension Benefits**

Ann Martin	9/1/2022	\$583.98
Daniel Pereiro	11/1/2022	\$2,461.54
Elaine Prusak	10/1/2022	\$426.51
Larry Stowe	11/1/2022	\$744.83

Mr. Meisner moved, seconded by Mr. Daly, to approve the Pension Benefits as presented.

Vote: 6-0-0 motion carried

**Investment Policy**

The Board performed their annual review of the Investment Policy and decided not to make any changes.

Mr. Paulson moved, seconded by Ms. Pries, to keep the Investment Policy the same for now.

Vote: 6-0-0 motion carried

### **Annual First Selectman's Letter 2022**

The Annual First Selectman's Letter was discussed and suggestions made for the update. It was noted that page 2 would need to be updated (Ms. Pires) and information regarding the Portfolio changes that were made would need to be included (Beirne). The Board agreed to address the changes before the next meeting in April.

### **Approval of Minutes**

#### **October 25, 2022**

Mr. Meisner moved, seconded by Ms. Pires, that the October 25, 2022 minutes be approved as presented.

Mr. Meisner requested that the Investment Update section be eliminated leaving only the last sentence.

Mr. Paulson moved, seconded by Ms. Pellitteri, to approve the October 25, 2022 minutes as amended.

Vote: 4-0-2 (abstained: Paulson and Pellitteri) motion carried

#### **November 30, 2022**

Mr. Meisner moved, seconded by Mr. Paulson, that the November 30, 2022 minutes be approved as presented.

Mr. Paulson noted the meeting was held via zoom not at the Town Hall.

Mr. Meisner moved, seconded by Mr. Paulson, that the November 30, 2022 minutes be approved as amended.

Vote: 5-0-1 (abstained: Daly) motion carried

### **Adjournment**

By unanimous consent the meeting was adjourned at 8:45 p.m.

Respectfully submitted,

*Phyllis C. Collier*

Phyllis C. Collier  
Pension Board Clerk

REPORT PREPARED FOR:



**BW** Beirne Wealth Consulting  
Services, LLC

Your Strategic Partner for Defined Benefit Plans

Quarter Ending 3/31/2023

John-Oliver Beirne, CRPC®, MBA  
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Richard DeFrancesco, Jr.  
Partner, Chief Operating Officer  
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(203) 951-3577

Lindsey Allard, AWMA®, MBA  
Partner, Managing Director  
LAllard@beirnewealth.com  
(203) 951-0305

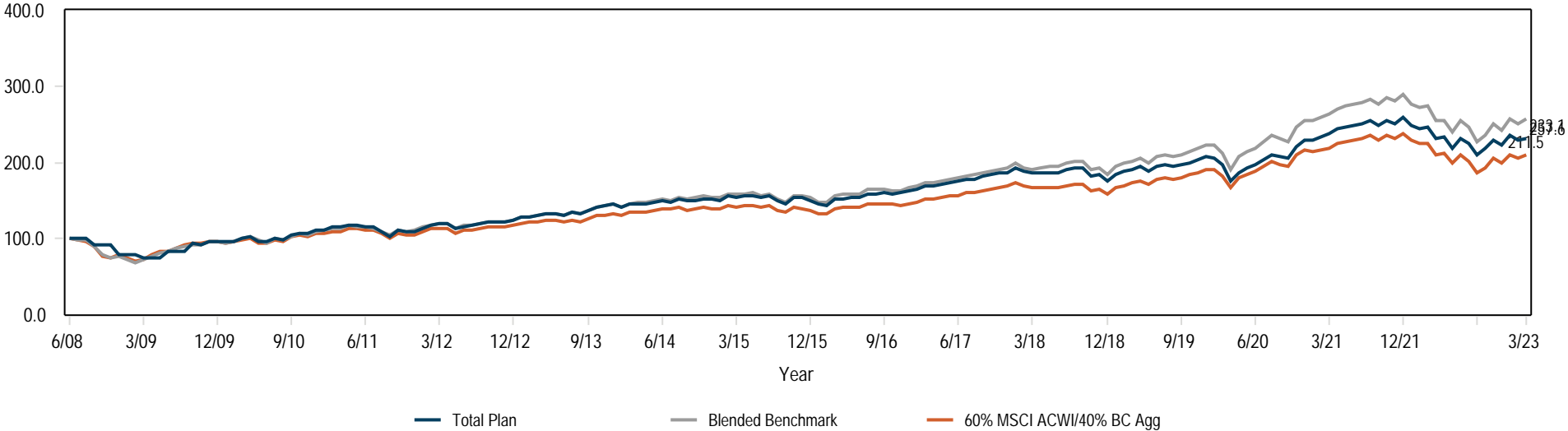
Taylor Garguilo  
Manager  
TGarguilo@beirnewealth.com  
(203) 951-5918



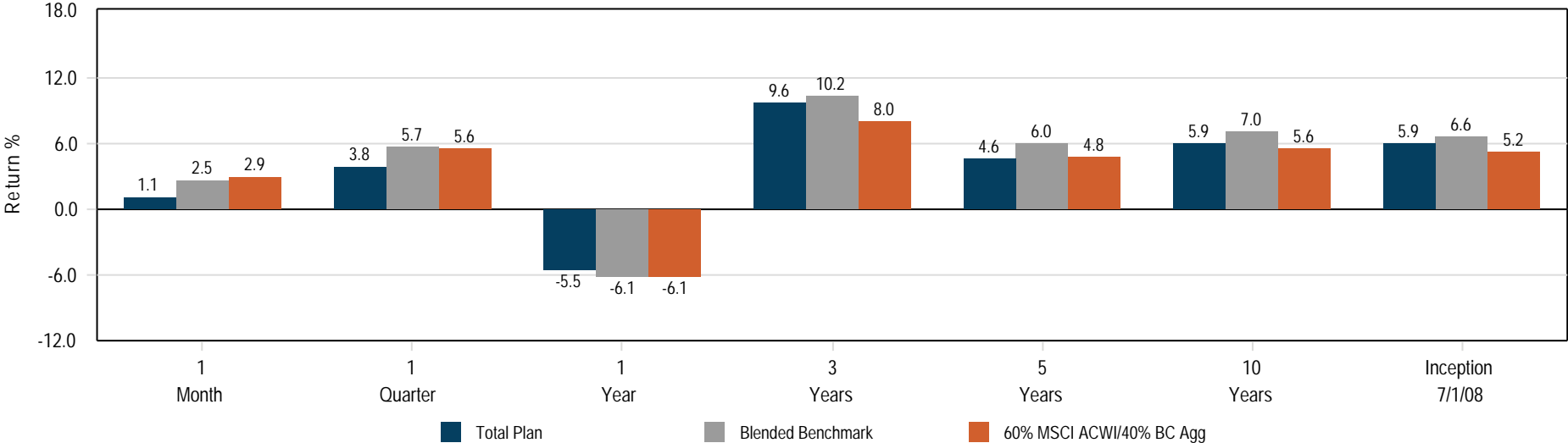
Periods Ending 03/31/23

Name	1 Month	Last 3 Months	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years
<b>US Equity</b>								
Russell 3000 Index	2.7	7.2	-8.6	18.5	10.5	11.7	9.9	11.4
S&P 500 Index	3.7	7.5	-7.7	18.6	11.2	12.2	10.1	12.0
Russell 1000 Index	3.2	7.5	-8.4	18.6	10.9	12.0	10.0	11.8
Russell 1000 Growth Index	6.8	14.4	-10.9	18.6	13.7	14.6	12.1	10.4
Russell 1000 Value Index	-0.5	1.0	-5.9	17.9	7.5	9.1	7.7	12.6
Russell Midcap Index	-1.5	4.1	-8.8	19.2	8.1	10.1	9.5	12.1
Russell 2000 Index	-4.8	2.7	-11.6	17.5	4.7	8.0	8.1	8.3
Russell 2000 Growth Index	-2.5	6.1	-10.6	13.4	4.3	8.5	8.7	4.8
Russell 2000 Value Index	-7.2	-0.7	-13.0	21.0	4.5	7.2	7.2	11.5
<b>International Equity</b>								
MSCI AC World Index	3.2	7.4	-7.0	15.9	7.5	8.6	6.6	-
MSCI AC World ex USA	2.5	7.0	-4.6	12.3	3.0	4.7	3.1	-
MSCI EAFE Index	2.6	8.6	-0.9	13.5	4.0	5.5	3.5	9.7
MSCI Emerging Markets Index	3.1	4.0	-10.3	8.2	-0.5	2.4	2.0	-
<b>Fixed Income</b>								
90 Day U.S. Treasury Bill	0.4	1.1	2.5	0.9	1.4	0.9	0.7	5.9
Blmbg. U.S. Aggregate	2.5	3.0	-4.8	-2.8	0.9	1.4	2.7	9.5
Blmbg. U.S. Gov't/Credit	2.8	3.2	-4.8	-2.6	1.2	1.5	2.8	9.4
Bloomberg U.S. Municipal Bond Index	2.2	2.8	0.3	0.3	2.0	2.4	3.6	8.5
Blmbg. U.S. Corp: High Yield Index	1.1	3.6	-3.3	5.9	3.2	4.1	6.6	-
<b>Real Estate</b>								
FTSE NAREIT All REITs Index	-2.1	1.5	-19.8	10.3	5.7	6.1	6.6	8.6
NCREIF Property Index	-	-	-	-	-	-	-	7.7
<b>Alternatives</b>								
HFRI Fund of Funds Composite Index	-0.7	0.7	-1.9	7.2	3.1	3.2	2.1	-
<b>Inflation</b>								
CPI - All Urban Consumers (SA)	0.1	0.9	5.0	5.3	3.9	2.7	2.3	3.2

Growth of a Dollar



Return Summary (%)



## Total Plan

March 31, 2023

	Begin Market Value \$	Net Cash Flow \$	Market Value (\$)	% of Portfolio	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Plan</b>	42,583,213	1,227,072	45,397,764	100.00	3.76	-5.54	9.64	4.61	5.94	5.90	Jul-08
<i>Blended Benchmark</i>					5.69	-6.05	10.22	6.01	6.97	6.63	
Over/Under					-1.93	0.51	-0.58	-1.40	-1.03	-0.73	
<i>60% MSCI ACWI/40% BC Agg</i>					5.57	-6.14	8.02	4.81	5.57	5.21	
Over/Under					-1.81	0.60	1.62	-0.20	0.37	0.69	
<b>Total Equity</b>	23,672,546	-7,776	24,962,729	54.99	5.48	-7.59	16.33	6.50	-	9.05	Jul-16
<b>Domestic Equities</b>	17,243,628	-6,334	18,042,228	39.74	4.67	-8.66	18.47	8.23	-	10.01	Jul-16
Vanguard Institutional Index(VINIX)	8,192,618	-	8,806,016	19.40	7.49	-7.77	18.57	11.16	12.21	13.00	Nov-09
<i>S&amp;P 500 Index</i>					7.50	-7.73	18.60	11.19	12.24	13.02	
Over/Under					-0.01	-0.04	-0.03	-0.03	-0.03	-0.02	
iShares Russell 1000 Value ETF(IWD)	1,258,695	-6,334	1,263,758	2.78	0.91	-6.19	-	-	-	11.30	Sep-20
<i>Russell 1000 Value Index</i>					1.01	-5.91	-	-	-	11.54	
Over/Under					-0.10	-0.28	-	-	-	-0.24	
Diamond Hill Large Cap(DHLYX)	2,646,517	-	2,627,392	5.79	-0.72	-10.96	17.33	8.03	10.20	10.27	Apr-11
<i>Russell 1000 Value Index</i>					1.01	-5.91	17.93	7.50	9.13	9.52	
Over/Under					-1.73	-5.05	-0.60	0.53	1.07	0.75	
AQR Large Cap Multi-Sytle(QCELX)	1,662,879	-	1,753,464	3.86	5.45	-8.34	18.74	-	-	9.12	Dec-18
<i>Russell 1000 Index</i>					7.46	-8.39	18.55	-	-	11.26	
Over/Under					-2.01	0.05	0.19	-	-	-2.14	
Vanguard Mid Cap Index Adm(VIMAX)	1,285,796	-	1,335,514	2.94	3.87	-9.89	18.73	8.13	-	9.49	Jan-17
<i>CRSP U.S. Mid Cap TR Index</i>					3.87	-9.85	18.75	8.15	-	9.52	
Over/Under					0.00	-0.04	-0.02	-0.02	-	-0.03	
Vanguard Small-Cap Index Fund Adm(VSMAX)	1,259,104	-	1,306,145	2.88	3.74	-9.38	19.65	6.75	-	7.89	Jan-17
<i>CRSP U.S. Small Cap TR Index</i>					3.71	-9.39	19.63	6.74	-	7.88	
Over/Under					0.03	0.01	0.02	0.01	-	0.01	
AQR Small Cap Multi-Sytle(OSMLX)	938,019	-	949,940	2.09	1.27	-10.05	21.91	-	-	6.60	Dec-18
<i>Russell 2000 Index</i>					2.74	-11.61	17.51	-	-	5.19	
Over/Under					-1.47	1.56	4.40	-	-	1.41	

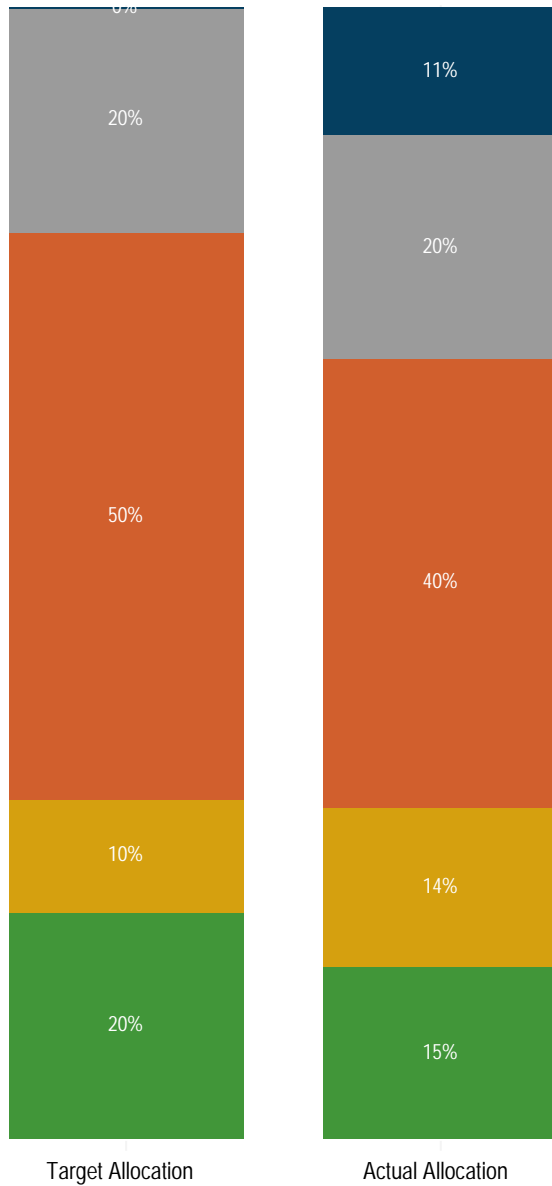
	Begin Market Value \$	Net Cash Flow \$	Market Value (\$)	% of Portfolio	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>International Equities</b>	6,428,919	-1,442	6,920,500	15.24	7.67	-4.81	11.90	2.60	-	6.86	Jul-16
American Funds EuroPacific Growth(RERGX)	2,973,398	-	3,266,917	7.20	9.87	-3.25	12.13	3.25	5.99	6.11	Nov-09
<i>MSCI AC World ex USA Growth (Net)</i>					8.59	-6.35	9.49	3.36	5.08	5.60	
Over/Under					1.28	3.10	2.64	-0.11	0.91	0.51	
AQR International Multi-Style(QICLX)	1,455,496	-	1,580,700	3.48	8.60	-0.73	14.44	-	-	6.38	Dec-18
<i>MSCI AC World ex USA (Net)</i>					6.87	-5.07	11.80	-	-	5.14	
Over/Under					1.73	4.34	2.64	-	-	1.24	
Vanguard Emerging Markets(VWO)	2,000,025	-1,442	2,072,884	4.57	3.72	-8.99	9.52	-	-	3.47	Dec-18
<i>FTSE Emerging Mkts All Cap China A Inclusion Index</i>					3.11	-9.79	9.87	-	-	3.96	
Over/Under					0.61	0.80	-0.35	-	-	-0.49	
<b>Fixed Income</b>	8,396,606	313,598	8,952,342	19.72	2.84	-4.26	-0.47	0.81	-	1.20	Jul-16
Western Asset Core Plus Bond(WAPSX)	1,980,439	-	2,047,748	4.51	3.40	-7.96	-2.65	0.18	-	1.56	Nov-14
<i>Blmbg. U.S. Aggregate</i>					2.96	-4.78	-2.77	0.90	-	1.25	
Over/Under					0.44	-3.18	0.12	-0.72	-	0.31	
Vanguard Total Bond Market Index(VBTLX)	2,053,510	-	2,118,401	4.67	3.16	-4.71	-2.80	-	-	1.08	Dec-18
<i>Blmbg. U.S. Aggregate</i>					2.96	-4.78	-2.77	-	-	1.12	
Over/Under					0.20	0.07	-0.03	-	-	-0.04	
Golub Capital BDC 4, Inc.(\$1 mill)	30,506	19,167	50,000	0.11	0.66	-	-	-	-	2.35	Dec-22
<i>Blmbg. U.S. Aggregate</i>					2.96	-	-	-	-	2.50	
Over/Under					-2.30	-	-	-	-	-0.15	
PIMCO Income Instl(PIMIX)	4,277,340	-	4,386,952	9.66	2.56	-1.47	3.58	2.24	-	2.19	Feb-18
<i>Blmbg. U.S. Universal Index</i>					2.93	-4.61	-2.02	1.05	-	0.93	
Over/Under					-0.37	3.14	5.60	1.19	-	1.26	
Greywolf Opportunities Offshore Fund II, LP(\$1 mill)	54,810	244,934	299,744	0.66	0.00	-	-	-	-	-0.46	Oct-22
<i>Blmbg. U.S. Corp: High Yield Index</i>					3.57	-	-	-	-	7.89	
Over/Under					-3.57	-	-	-	-	-8.35	
Silver Point Specialty Credit Fund III, LP	-	49,497	49,497	0.11	-	-	-	-	-	-	Mar-23
<i>HFRI RV: Fixed Income-Corporate Index</i>					-	-	-	-	-	-0.46	
Over/Under					-	-	-	-	-	-	

## Total Plan

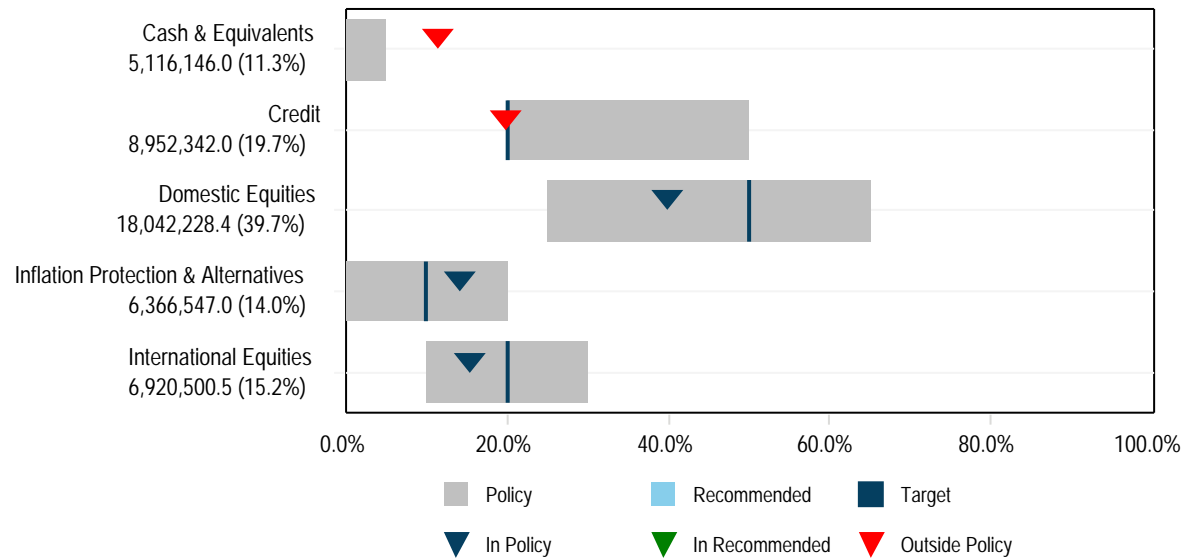
	Begin Market Value \$	Net Cash Flow \$	Market Value (\$)	% of Portfolio	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Inflation Protection & Alternatives	6,354,383	12,164	6,366,547	14.02	0.00	3.48	5.44	7.59	-	6.75	Dec-16
Boyd Watterson GSA Fund, LP(\$2 mill)	2,147,227	-26,717	2,120,510	4.67	0.00	2.89	6.01	-	-	6.26	Jan-19
Boyd Diversified Government REIT, Inc.(\$2 mill)	2,056,065	-	2,056,065	4.53	0.00	-	-	-	-	2.80	Sep-22
Boyd Watterson State Govt Fund, LP(\$750K)	851,491	-11,119	840,372	1.85	0.00	4.04	7.43	-	-	8.28	Jun-19
Longford Capital Fund II, LP (\$2 million)	902,720	-	902,720	1.99	0.00	-3.99	-0.32	7.20	-	-0.35	Jul-17
Longford Capital Fund III, LP (\$2 million)	396,880	50,000	446,880	0.98	0.00	19.23	2.21	-	-	2.21	Apr-20
Cash & Equivalents	4,159,678	909,086	5,116,146	11.27	0.95	1.95	0.69	1.27	-	1.17	Jul-16
Allspring Gov MMKT(GVIXX)	4,159,678	909,086	5,116,146	11.27	0.95	1.95	0.69	1.27	0.80	0.60	Nov-09
90 Day U.S. Treasury Bill					1.07	2.50	0.89	1.41	0.86	0.68	
Over/Under					-0.12	-0.55	-0.20	-0.14	-0.06	-0.08	

Approx. 15% of portfolio is unvalued as of 3/31. This portion is also only valued quarterly.

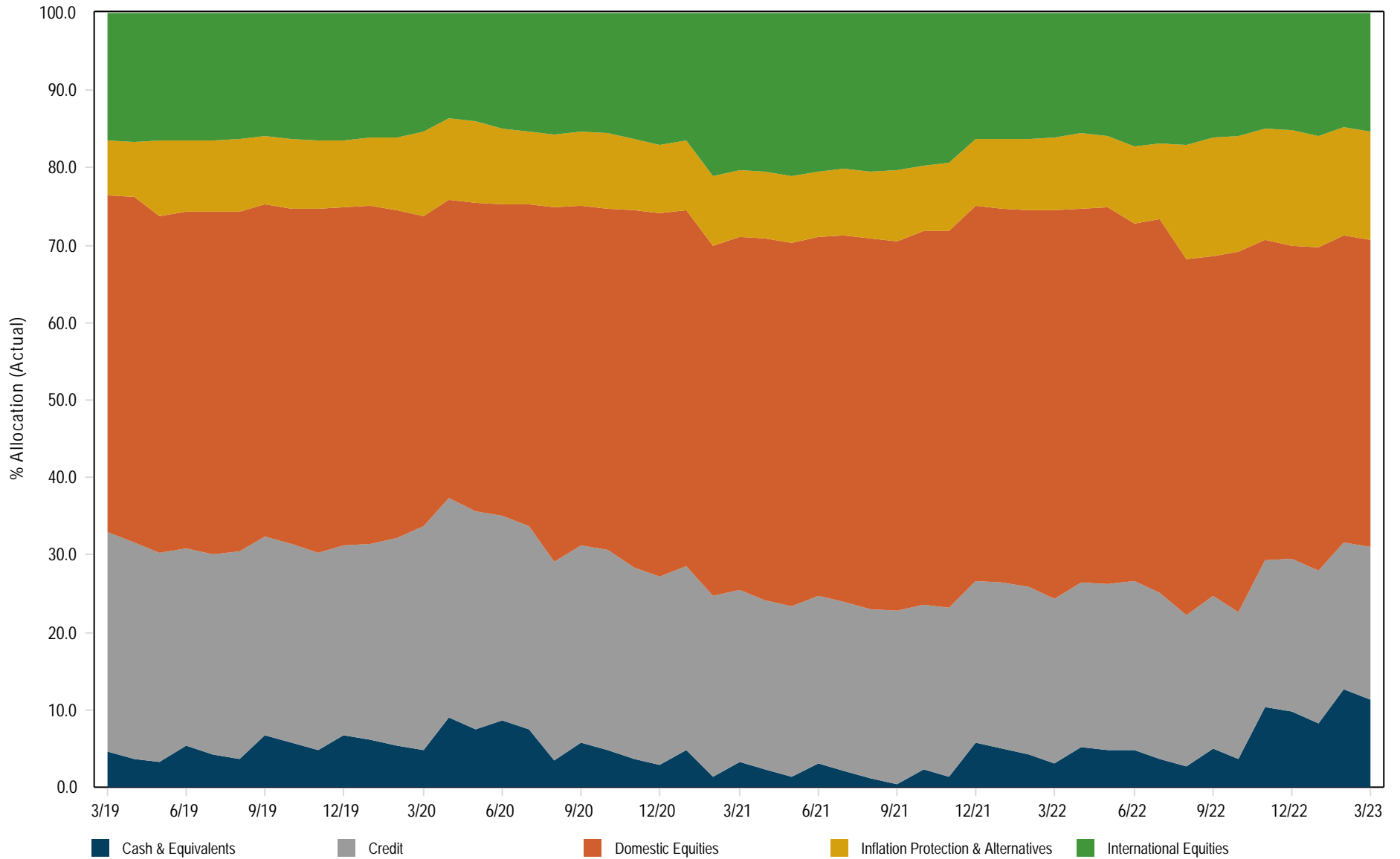
Blended Benchmark = BBgBarc US Aggregate TR 32.5% / S&P 500 25% / Russell 1000 Growth 8% / Russell 1000 Value 8% / Russell 2000 5.3% / MSCI ACWI ex USA 21.3%.



	Current Balance	Current Allocation	Policy	Policy Range	Difference	Within IPS Range?
Cash & Equivalents	\$5,116,146	11.3	0.0	0.0 - 5.0	11.3	No
Credit	\$8,952,342	19.7	20.0	20.0 - 50.0	-0.3	No
Domestic Equities	\$18,042,228	39.7	50.0	25.0 - 65.0	-10.3	Yes
Inflation Protection & Alternatives	\$6,366,547	14.0	10.0	0.0 - 20.0	4.0	Yes
International Equities	\$6,920,500	15.2	20.0	10.0 - 30.0	-4.8	Yes
<b>Total</b>	<b>\$45,397,764</b>	<b>100.0</b>	<b>100.0</b>		<b>0.0</b>	



Asset Allocation History



## Town of Trumbull Retirement Plan

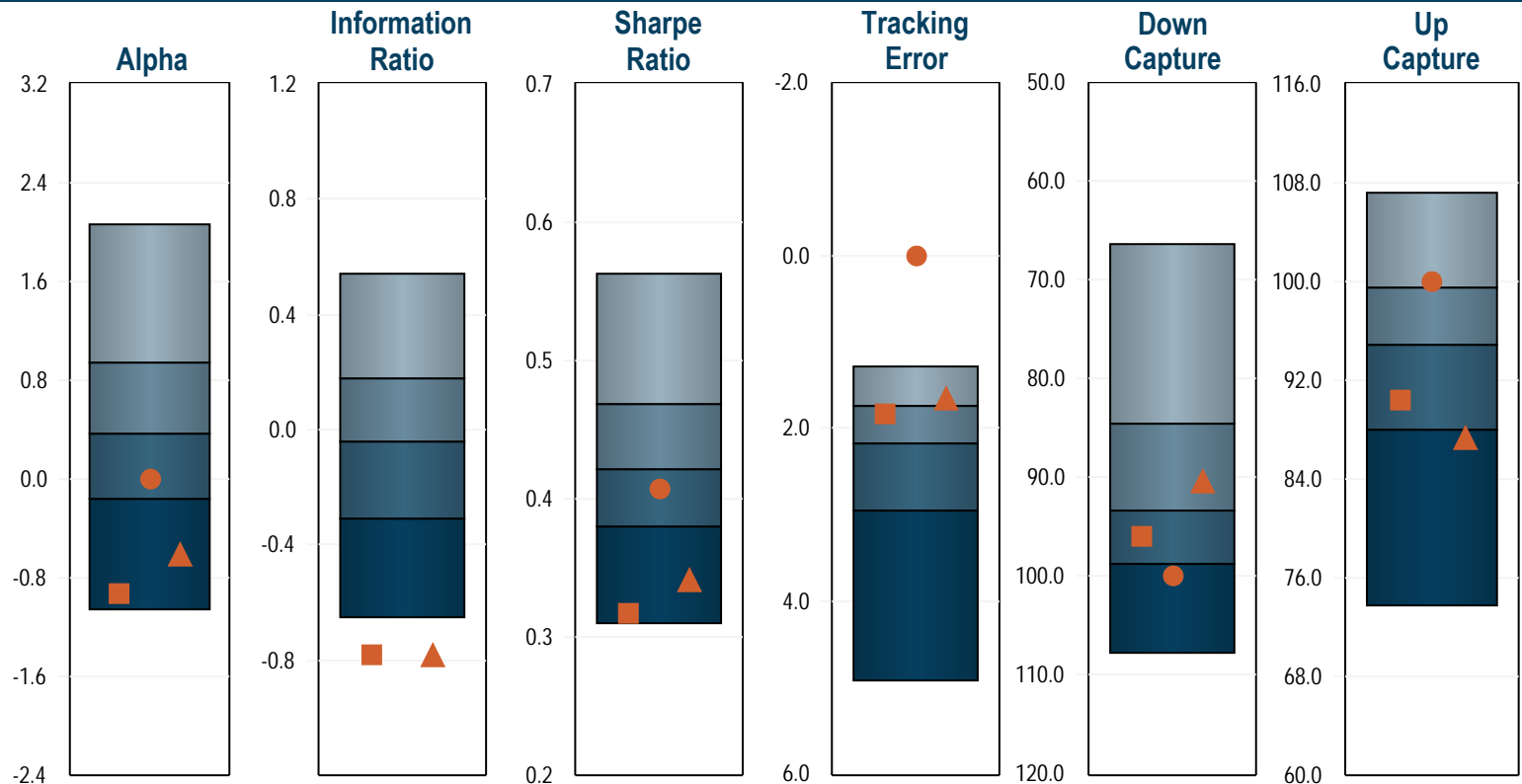
### Cash Flow

	2019	2020	2021	2022	Q12023
Employee Contributions	\$ 930,299	\$ 945,374	\$ 835,980	\$ 995,238	\$ 183,276
Town Contributions	\$ 5,557,241	\$ 3,944,000	\$ 6,641,000	\$ 3,980,750	\$ 2,662,500
<b>Total Contributions</b>	<b>\$ 6,487,540</b>	<b>\$ 4,889,374</b>	<b>\$ 7,476,980</b>	<b>\$ 4,975,988</b>	<b>\$ 2,845,776</b>
Benefit Payments	\$ (5,798,137)	\$ (5,628,604)	\$ (5,957,741)	\$ (6,306,960)	\$ (1,597,801)
Plan Expenses	\$ (66,976)	\$ (79,912)	\$ (84,519)	\$ (83,045)	\$ (20,410)
<b>Total Payments &amp; Expenses</b>	<b>\$ (5,865,113)</b>	<b>\$ (5,708,515)</b>	<b>\$ (6,042,260)</b>	<b>\$ (6,390,005)</b>	<b>\$ (1,618,211)</b>
Net Cashflows	\$ 622,427	\$ (819,142)	\$ 1,434,721	\$ (1,414,017)	\$ 1,227,565
Market Value	\$ 40,481,214	\$ 43,806,474	\$ 50,910,788	\$ 42,583,213	\$ 45,397,764
Net Contributions Annual Rate*	1.54%	-1.87%	2.82%	-3.32%	2.70%

Differences are due to timing of cash flows



**Total Plan**



**All Public DB Plans as of March 31, 2023**

	5 Years	5 Years	5 Years	5 Years	5 Years	5 Years
■ Total Plan	-0.9 (92)	-0.8 (97)	0.3 (92)	1.8 (30)	95.9 (60)	90.5 (66)
● Blended Benchmark	0.0 (69)	-	0.4 (61)	0.0 (1)	100.0 (80)	100.0 (24)
▲ 60% MSCI ACWI/40% BC Agg	-0.6 (88)	-0.8 (98)	0.3 (88)	1.7 (21)	90.5 (40)	87.4 (77)

5th Percentile	2.1	0.5	0.6	1.3	66.3	107.2
1st Quartile	0.9	0.2	0.5	1.7	84.6	99.5
Median	0.4	0.0	0.4	2.2	93.4	94.9
3rd Quartile	-0.2	-0.3	0.4	3.0	98.9	88.1
95th Percentile	-1.1	-0.6	0.3	4.9	107.7	73.7

Parenteses contain percentile rankings.  
Calculation based on monthly periodicity.

## 1st Quarter Commentary

Total Fund

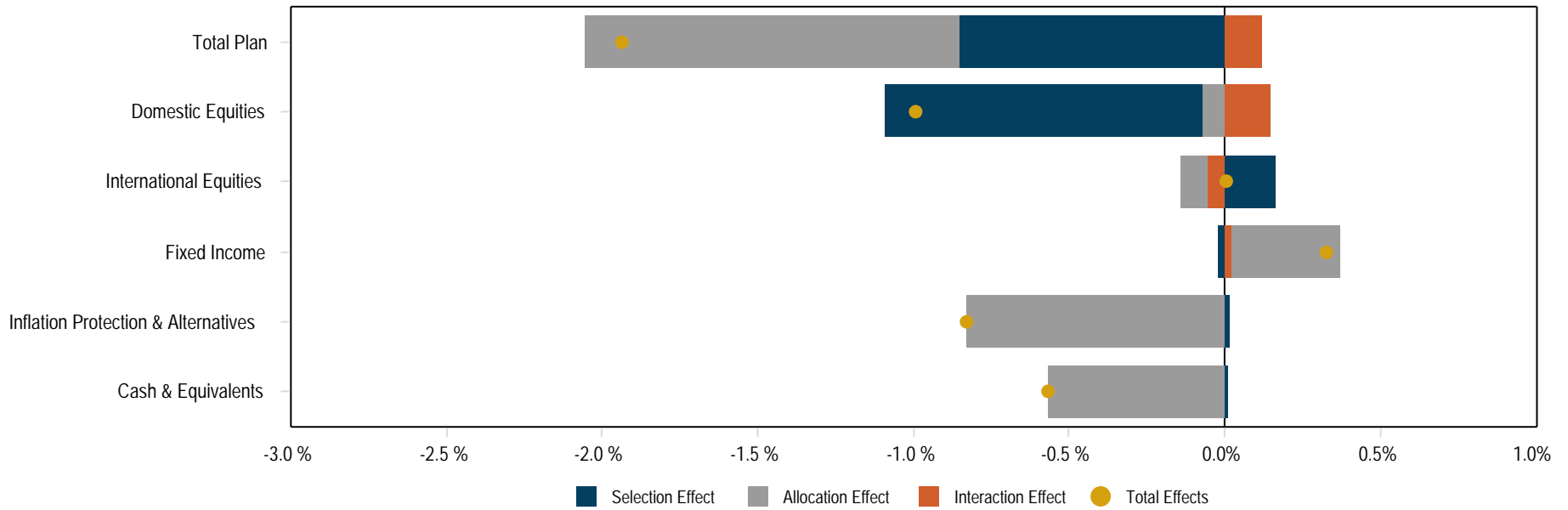
The Town of Trumbull Retirement Plan ended the 1st quarter with \$45.4 million in assets (including approx. \$1.2 million in net distributions), up from \$42.6 million in December. Relative to policy targets, the portfolio segments are within +/- 12% of policy. The Fund has an overweight to Inflation Protection & Alternatives and to Cash & Equivalents. Conversely, The Fund has an underweight to International Equities and to Domestic Equities. The Total Fund returned +3.8% for the quarter, 1.9% below the policy and ranking below the median (78th percentile) of the All Public DB Plans Universe. For the Fiscal Year, The Fund trails the benchmark by 1.0% but ranks above the median (43rd percentile) of the same universe. The Domestic Equities segment's underperformance of its benchmark (Domestic Equity Benchmark\*) dragged relative performance during the quarter. Also, an overweight to cash detracted relative performance.

Watch List (due to underperformance for the past three consecutive quarters)

None

\*\*Approximately 15% of portfolio is unvalued as of 3/31.

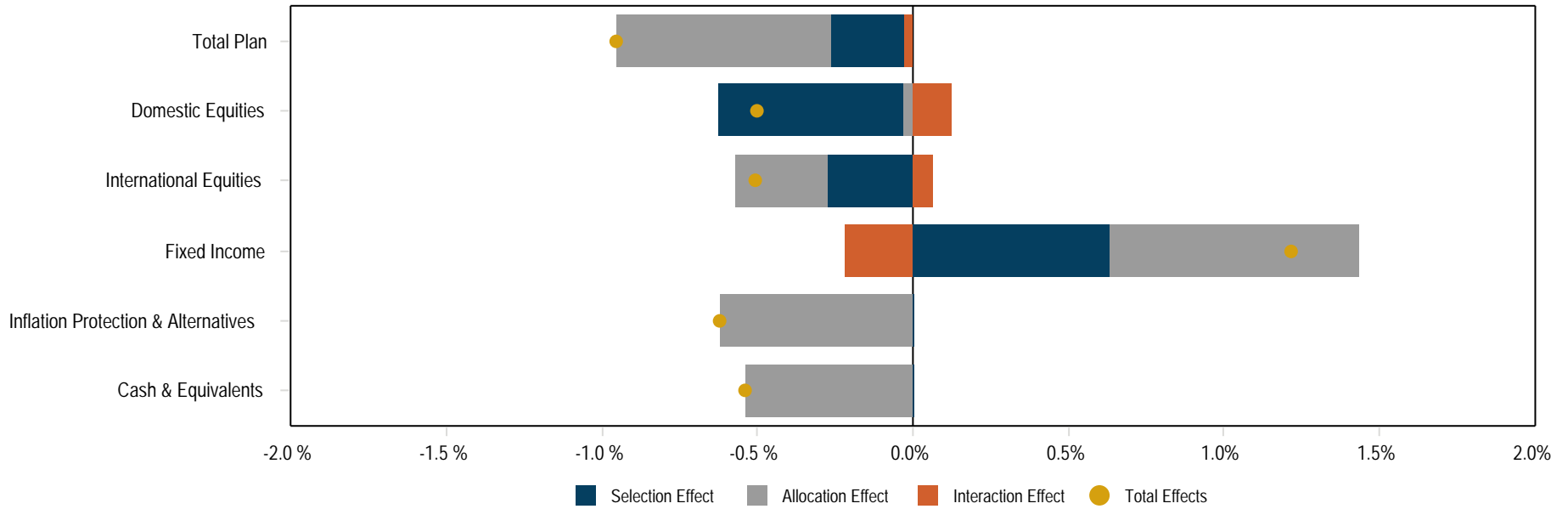
**Quarter To Date**



**Quarter To Date**

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effect	Total Effect
Domestic Equities	4.7	7.0	-2.3	-1.0	-0.1	0.1	-1.0
International Equities	7.7	7.0	0.7	0.2	-0.1	-0.1	0.0
Fixed Income	2.8	3.0	-0.1	0.0	0.3	0.0	0.3
Inflation Protection & Alternatives	0.0	0.9	-0.9	0.0	-0.8	0.0	-0.8
Cash & Equivalents	0.9	1.1	-0.1	0.0	-0.6	0.0	-0.6
<b>Total Plan</b>	<b>3.8</b>	<b>5.7</b>	<b>-1.9</b>	<b>-0.9</b>	<b>-1.2</b>	<b>0.1</b>	<b>-1.9</b>

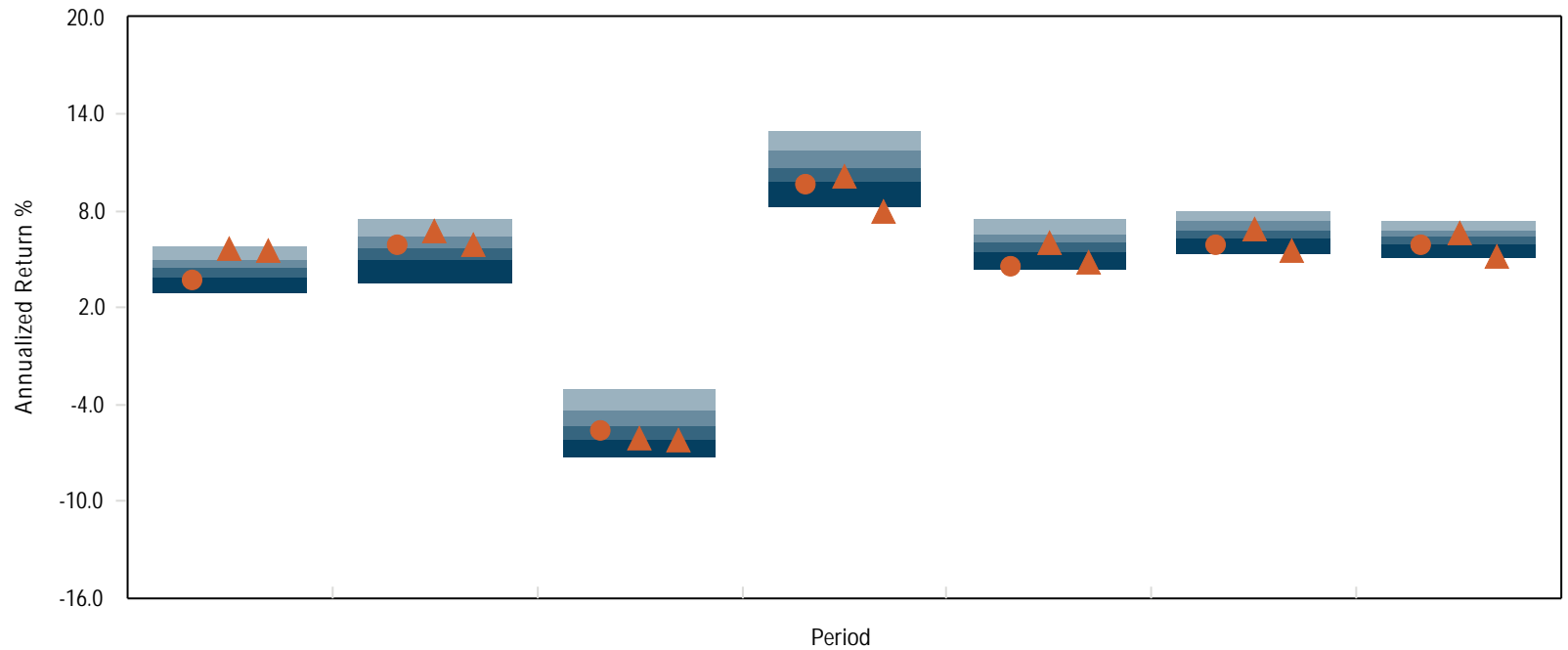
**Fiscal Year To Date**



**Fiscal Year To Date**

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effect	Total Effect
Domestic Equities	8.4	9.7	-1.3	-0.6	0.0	0.1	-0.5
International Equities	8.9	10.4	-1.4	-0.3	-0.3	0.1	-0.5
Fixed Income	1.8	-0.1	1.9	0.6	0.8	-0.2	1.2
Inflation Protection & Alternatives	1.5	2.4	-0.9	0.0	-0.6	0.0	-0.6
Cash & Equivalents	1.9	2.4	-0.5	0.0	-0.5	0.0	-0.5
<b>Total Plan</b>	<b>5.9</b>	<b>6.8</b>	<b>-1.0</b>	<b>-0.2</b>	<b>-0.7</b>	<b>0.0</b>	<b>-1.0</b>

Total Plan vs. All Public DB Plans as of March 31, 2023

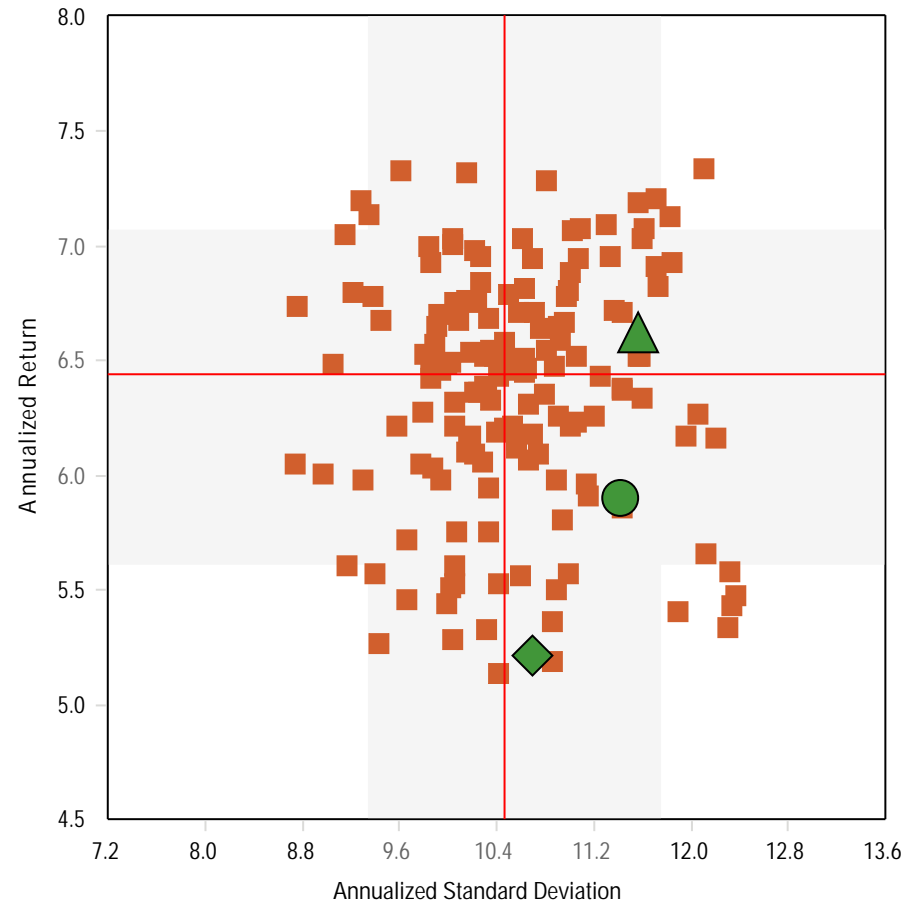
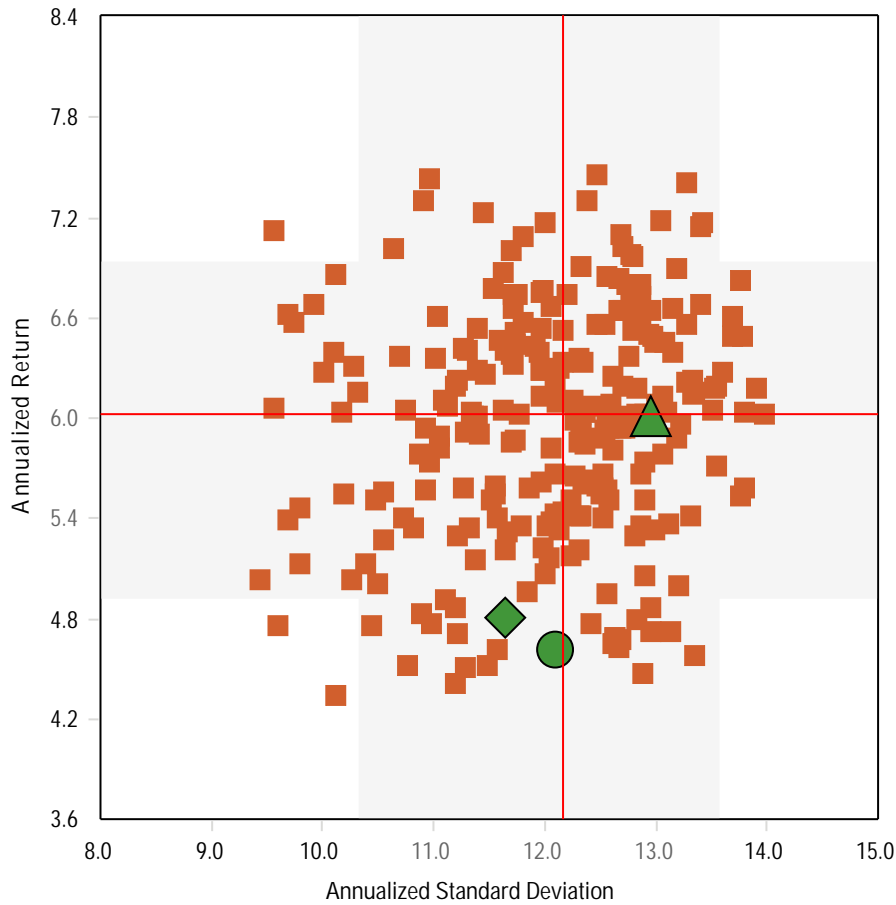


	Quarter	Jul-2022 To Mar-2023	1 Year	3 Years	5 Years	10 Years	Since Inception
● Total Plan	3.8 (78)	5.9 (43)	-5.5 (56)	9.6 (79)	4.6 (93)	5.9 (87)	5.9 (78)
▲ Blended Benchmark	5.7 (9)	6.8 (13)	-6.1 (72)	10.2 (65)	6.0 (52)	7.0 (40)	6.6 (35)
▲ 60% MSCI ACWI/40% BC Agg	5.6 (11)	5.9 (42)	-6.1 (73)	8.0 (96)	4.8 (88)	5.6 (93)	5.2 (94)
5th Percentile	5.9	7.5	-3.0	13.0	7.5	8.0	7.4
1st Quartile	5.0	6.4	-4.4	11.8	6.5	7.4	6.8
Median	4.4	5.7	-5.4	10.7	6.0	6.8	6.4
3rd Quartile	3.9	5.0	-6.2	9.9	5.4	6.2	6.0
95th Percentile	2.9	3.5	-7.2	8.3	4.3	5.4	5.1
Population	325	324	318	309	299	251	188

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.

Annualized Return vs. Annualized Standard Deviation  
5 Years Ending March 31, 2023

Annualized Return vs. Annualized Standard Deviation  
Since Inception Ending March 31, 2023



- Peergroup
  - Total Plan
  - ▲ Blended Benchmark
  - ◆ 60% MSCI ACWI/40% BC Agg
  - X Sigma Band
  - Y Sigma Band
- Sigma Cross Section

- Peergroup
  - Total Plan
  - ▲ Blended Benchmark
  - ◆ 60% MSCI ACWI/40% BC Agg
  - X Sigma Band
  - Y Sigma Band
- Sigma Cross Section

## Total Plan

March 31, 2023

	Market Value As of 03/31/2023	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Total Plan	45,397,764	100.00	191,114	0.42
Vanguard Institutional Index(VINIX)	8,806,016	19.40	3,522	0.04
iShares Russell 1000 Value ETF(IWD)	1,263,758	2.78	2,275	0.18
Diamond Hill Large Cap(DHLYX)	2,627,392	5.79	14,451	0.55
AQR Large Cap Multi-Sytle(QCELX)	1,753,464	3.86	7,189	0.41
Vanguard Mid Cap Index Adm(VIMAX)	1,335,514	2.94	668	0.05
Vanguard Small-Cap Index Fund Adm(VSMAX)	1,306,145	2.88	653	0.05
AQR Small Cap Multi-Sytle(QSMLX)	949,940	2.09	5,795	0.61
American Funds EuroPacific Growth(ERGX)	3,266,917	7.20	15,028	0.46
AQR International Multi-Style(QICLX)	1,580,700	3.48	8,694	0.55
Vanguard Emerging Markets(VWO)	2,072,884	4.57	1,658	0.08
Western Asset Core Plus Bond(WAPSX)	2,047,748	4.51	8,601	0.42
Vanguard Total Bond Market Index(VBTLX)	2,118,401	4.67	1,059	0.05
Golub Capital BDC 4, Inc.(\$1 mill)	50,000	0.11	625	1.25
PIMCO Income Instl(PIMIX)	4,386,952	9.66	22,373	0.51
Greywolf Opportunities Offshore Fund II, LP(\$1 mill)	299,744	0.66	4,496	1.50
Silver Point Specialty Credit Fund III, LP	49,497	0.11	742	1.50
Boyd Watterson GSA Fund, LP(\$2 mill)	2,120,510	4.67	26,506	1.25
Boyd Diversified Government REIT, Inc.(\$2 mill)	2,056,065	4.53	25,701	1.25
Boyd Watterson State Govt Fund, LP(\$750K)	840,372	1.85	10,505	1.25
Longford Capital Fund II, LP (\$2 million)	902,720	1.99	18,054	2.00
Longford Capital Fund III, LP (\$2 million)	446,880	0.98	8,938	2.00
Allspring Gov MMKT(GVIXX)	5,116,146	11.27	3,581	0.07

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A "since inception" return, if reported, begins with the first full month after funding, although actual inception dates (e.g., the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

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## 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.
- 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.
- HFRI 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 HFRI 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.

## 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 cannot 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.
- 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.
- 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.