TOWN OF SOUTH WINDSOR PENSION COMMITTEE MINUTES January 25, 2021

1. <u>Call Meeting to Order</u>

The virtual meeting was called to order at 8:30 a.m.

Members Present:	Chris Chemerka, Board of Education; Audrey Delnicki, Town Council; MJ Hockenberry, Town Council; Kristian Lindstrom, Chief of Police; Michael Maniscalco, Town Manager; James O'Brien, Board of Education; Andrew Paterna, Mayor; Patricia Perry, Director of Finance
Members Absent:	None
Also Present:	Michelle Boyles, Milliman Anthony Tranghese, DiMeo Schneider & Associates, LLC

2. <u>Approval of Minutes</u>

Councilor Delnicki moved to approve the minutes of November 16, 2020. Councilor Hockenberry seconded, and the motion was approved unanimously.

3. Discussion Items

A. Update – DiMeo Schneider & Associates, LLC (DSA)

Mr. Anthony Tranghese gave the fourth quarter investment review (**Attachment A**, **Q4 Review**) for the BOE and Town portfolios. The document may also be viewed upon request in the Town Clerk's Office.

The recommendation was made to reallocate the portfolios of both the Town and BOE to the Principal Diversified Real Assets Fund. For further detail, please see **Attachment B, Portfolio Recommendations.**

Councilor Hockenberry moved to accept the new target allocation as proposed. Councilor Delnicki seconded, and the motion was approved unanimously.

B. 7/1/20 Actuarial Valuation – Milliman

Ms. Michelle Boyles reported on the actuarial valuations, as of July 1, 2020, for the Town and BOE portfolios (Attachment C and Attachment D). Please see attached documents for further detail. The documents may also be viewed upon request in the Town Clerk's Office.

TOWN OF SOUTH WINDSOR PENSION COMMITTEE MINUTES January 25, 2021

4. Miscellaneous

None.

5. Schedule the Next Meeting

The next meeting of the Pension Committee will be scheduled for early 2021 (TBA).

6. Adjournment

The meeting was adjourned at approximately 9:15 am.

Respectfully submitted,

Samara Haddock Recording Secretary

Minutes were compiled from meeting notes.

Attachments:

- A) Quarterly Investment Review Fourth Quarter 2020, prepared by DiMeo Schneider & Associates, LLC. May be reviewed upon request in the Town Clerk's Office.
- B) Portfolio Recommendations Diversified Real Assets, Prepared by DiMeo Schneider & Associates, LLC. May be reviewed upon request in the Town Clerk's Office.
- C) Retirement Plan for Employees of the Town of South Windsor: Actuarial Valuation as of July 1, 2020. Prepared by Milliman. May be reviewed upon request in the Town Clerk's Office.
- D) Retirement Plan for Employees of the Town of South Windsor Board of Education: Actuarial Valuation as of July 1, 2020. Prepared by Milliman. May be viewed upon request in the Town Clerk's Office.

Helping Clients Prosper.



South Windsor, CT

Quarterly Investment Review - Fourth Quarter 2020

This report is intended for the exclusive use of clients or prospective clients of DiMeo Schneider & Associates, L.L.C. 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 forecasts represent median expectations and actual returns, volatilities and correlations will differ from forecasts. Past performance does not indicate future performance.

2020 YEAR-END FIRM UPDATE



FIRM MILESTONES

- ✓ DiMeo Schneider and Fiduciary Investment Advisors, LLC ("FIA") joined forces as one combined firm
- ✓ Celebrated our 25th Anniversary on May 1, 2020
- ✓ Experienced growth in each of our service areas:
 - Retirement Plans

- Private Clients
- Financial Institutions

Endowments and Foundations

- Surpassed \$195 billion in assets under advisement¹
- 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

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

Whether you oversee endowment, foundation or retirement plan investments, learn from experts and explore strategies intended to help stewards improve performance, reduce costs and help your charitable organizations prosper.



Nonprofit Investment Stewards

PODCAST

dimeoschneider.com/blog





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FIDUCIARY GOVERNANCE CALENDAR



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

South Wi	ndsor Town Employees	Pension
	7/1/2020	7/1/2019
Actuarial Value of Assets	\$32,623,901	\$30,824,232
Total Accrued Liability	\$47,350,238	\$44,287,242
Funded Ratio	68.9%	69.6%
Actuarial Return Assumption	6.50%	6.75%



ACTUARIAL REVIEW

South Win	dsor Board of Educatio	n Pension
	7/1/2020	7/1/2019
Actuarial Value of Assets	\$15,884,858	\$14,807,472
Total Accrued Liability	\$18,994,803	\$17,663,897
Funded Ratio	83.6%	83.8%
Actuarial Return Assumption	6.50%	6.75%



ASSET ALLOCATION ANALYSIS

Asset Class	IPS Range	IPS Target	Current Allocation
Cash & Equivalents	0% - 10%	0%	1.1%
Fixed Income	27.5% - 45%	30%	28.5%
Domestic Equity	30% - 60%	41%	41.3%
International Equity	15% - 27%	24%	24.2%
Global REIT	0% - 10%	5%	4.8%

The current allocation is within the allowable range as stated within the Investment Policy Statement (IPS). Any portfolio adjustments that are considered may result in the IPS targets and ranges needing to be updated.

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

- <u>Economic Growth</u>: 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.
- <u>Monetary Policy</u>: 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.
- <u>Currency</u>: 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.

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.



JANUARY 2021 – LONG TERM OUTLOOK

Asset Class	12/1/20 E(R) - 20 Year	12/1/19 E(R) - 20 Year	Year Ove Chan	r Year ge
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%	1	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%		
Private Equity	9.4%	9.6%		

*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



¹The 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). ²The 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.



CAPITAL MARKETS OVERVIEW



4Q 2020 MARKET EVENTS

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



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 Barclavs 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.



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 pandemicinduced stimulus may cause inflation to rise in 2021.

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.





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.



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.



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.



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 risker parts of the market. U.S. dollar weakness helped foreign bonds.



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.



See disclosures for list of indices representing each asset class.



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.



50%



Equity Performance – Sector, Region, Market Cap

stellar fourth quarter which meaningfully boosted the full year return.

Tech stocks were the clear winners in 2020, but U.S. small caps had a

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.



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



INVESTING VIEWPOINTS

O Current Stance

International

Developed

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



Neutral

Q4 '20

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.



Emerging

Markets



PORTFOLIO AND MANAGER REVIEW

Town of South Windsor

Asset Allocation

As of December 31, 2020



Source: Wells Fargo

Asset Allocation

Town Account

As of December 31, 2020

	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)	Differences (%)
Total Pension	36,971,761	100.0	100.0	0.0
Short Term Liquidity	416,049	1.1	0.0	1.1
Wells Fargo Government Money Market Fund I	416,049	1.1	0.0	1.1
Fixed Income	10,549,824	28.5	30.0	-1.5
Metropolitan West Total Return Pl	5,915,082	16.0	17.0	-1.0
BlackRock Strategic Income Opportunities Fund K	1,768,269	4.8	5.0	-0.2
Eaton Vance Floating Rate R6	1,409,418	3.8	4.0	-0.2
BrandywineGLOBAL Global Opportunities Bond IS	1,457,054	3.9	4.0	-0.1
Domestic Equity	15,268,017	41.3	41.0	0.3
Vanguard Institutional Index Fund Instl	8,159,409	22.1	22.0	0.1
T. Rowe Price Equity Income I	3,104,352	8.4	8.5	-0.1
Harbor Capital Appreciation Ret	2,097,407	5.7	5.5	0.2
Glenmede Small Cap Equity Instl	1,906,850	5.2	5.0	0.2
International Equity	8,960,991	24.2	24.0	0.2
Dodge & Cox International Stock Fund	4,390,354	11.9	12.0	-0.1
Vanguard International Growth Fund Adm	4,570,636	12.4	12.0	0.4
Real Estate	1,776,880	4.8	5.0	-0.2
DFA Global Real Estate Securities I	1,776,880	4.8	5.0	-0.2

*Find the latest available statement for the Town of South Windsor Board of Education Account's Aetna Investment Annuity Contract at the end of this report.

Asset Allocation

Board of Education Account

As of December 31, 2020

	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)	Differences (%)
BOE Total Pension	17,224,804	100.0	100.0	0.0
Short Term Liquidity	219,300	1.3	0.0	1.3
Wells Fargo Government Money Market Fund I	219,300	1.3	0.0	1.3
Fixed Income	4,922,669	28.6	30.0	-1.4
Metropolitan West Total Return Pl	2,763,707	16.0	17.0	-1.0
BlackRock Strategic Income Opportunities Fund K	825,250	4.8	5.0	-0.2
Eaton Vance Floating Rate R6	654,585	3.8	4.0	-0.2
BrandywineGLOBAL Global Opportunities Bond IS	679,127	3.9	4.0	-0.1
Domestic Equity	7,093,938	41.2	41.0	0.2
Vanguard Institutional Index Fund Instl	3,767,803	21.9	22.0	-0.1
T. Rowe Price Equity Income I	1,444,364	8.4	8.5	-0.1
Harbor Capital Appreciation Ret	986,319	5.7	5.5	0.2
Glenmede Small Cap Equity Instl	895,452	5.2	5.0	0.2
Total International Equity	4,168,480	24.2	24.0	0.2
Dodge & Cox International Stock Fund	2,042,113	11.9	12.0	-0.1
Vanguard International Growth Fund Adm	2,126,367	12.3	12.0	0.3
Real Estate	820,417	4.8	5.0	-0.2
DFA Global Real Estate Securities I	820,417	4.8	5.0	-0.2

*Find the latest available statement for the Town of South Windsor Board of Education Account's Aetna Investment Annuity Contract at the end of this report.

Asset Allocation

South Windsor OPEB

As of December 31, 2020

	Asset	Asset	Target	Differences
	(\$)	(%)	(%)	(%)
Total Plan	4,056,121	100.0	100.0	0.0
Short Term Liquidity	28,483	0.7	0.0	0.7
Wells Fargo Adv Money Market	28,483	0.7	0.0	0.7
Fixed Income	1,159,826	28.6	30.0	-1.4
Metropolitan West Total Return Pl	649,822	16.0	17.0	-1.0
BlackRock Strategic Income Opportunities Fund K	194,190	4.8	5.0	-0.2
Eaton Vance Floating Rate R6	155,364	3.8	4.0	-0.2
BrandywineGLOBAL Global Opportunities IS	160,449	4.0	4.0	0.0
Domestic Equity	1,666,637	41.1	41.0	0.1
Vanguard Institutional Index Fund Instl	875,730	21.6	22.0	-0.4
T. Rowe Price Equity Income I	343,596	8.5	8.5	0.0
Harbor Capital Appreciation Ret	231,320	5.7	5.5	0.2
Glenmede Small Cap Equity Instl	215,991	5.3	5.0	0.3
International Equity	1,005,191	24.8	24.0	0.8
Dodge & Cox International Stock Fund	494,265	12.2	12.0	0.2
Vanguard International Growth Adm	510,926	12.6	12.0	0.6
Real Estate	195,985	4.8	5.0	-0.2
DFA Global Real Estate Securities I	195,985	4.8	5.0	-0.2

Town of South Windsor Employees and Board of Education Pension Plans

Portfolio Summary

As of December 31, 2020

Total Performance Summary							
	<u>QTR</u>	YTD	<u>1-Yr</u>	<u>3-Yr</u>	<u>5-Yr</u>	<u>10-Yr</u>	Since 5/1/2008**
Town Employees Plan	13.3%	16.7%	16.7%	9.1%	10.2%	7.8%	6.8%
Board of Ed Plan	13.2%	16.6%	16.6%	9.2%	10.3%	7.9%	6.5%
Blended Benchmark *	10.9%	13.5%	13.5%	8.7%	9.6%	7.9%	6.5%
	<u>QTR</u>	YTD	<u>1-Yr</u>	<u>3-Yr</u>	<u>5-Yr</u>	<u>10-Yr</u>	Since 9/1/2018
OPEB Plan	13.2%	16.9%	16.9%	N/A	N/A	N/A	10.9%
Blended Benchmark *	10.9%	13.5%	13.5%	N/A	N/A	N/A	10.2%

* Blended benchmark: 30% Bloomberg Barclays US Aggregate Index/41% Russell 3000 Index/24% MSCI AC World ex USA Index/5% S&P Global REIT Index

Manager Status Summary	Y		
Mandate	Manager/Fund	Status	Note
Fixed Income	Metropolitan West Total Return Pl	Maintain	N/A
Fixed Income	BlackRock Strategic Income Opportunities K	Maintain	N/A
Fixed Income	Eaton Vance Floating Rate R6	Maintain	N/A
Fixed Income	BrandywineGLOBAL Global Opportunities Bond IS	Maintain	N/A
Equity - Large Cap	Vanguard Institutional Index	Maintain	N/A
Equity - Large Cap	T. Rowe Price Equity Income I	Maintain	N/A
Equity - Large Cap	Harbor Capital Appreciation R	Maintain	N/A
Equity - Sm/Mid Cap	Glendmede Small Cap Equity I	Maintain	N/A
International Equity	Dodge & Cox International Stock	Maintain	N/A
International Equity	Vanguard International Growth Adm	Maintain	N/A
Real Estate	DFA Global Real Estate Securities I	Maintain	N/A

Manager Performance Overview As of December 31, 2020

	QTR	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Short Term Liquidity								
Wells Fargo Government Money Market Fund I	0.0	0.3	1.3	1.0	0.7	0.5	0.5	05/01/2008
90 Day U.S. Treasury Bill	0.0	0.7	1.6	1.2	0.9	0.6	0.6	
Fixed Income	3.3	8.6	5.5	5.2	4.2	4.2	5.0	01/01/2009
Blmbg. Barc. U.S. Aggregate Index	0.7	7.5	5.3	4.4	4.1	3.8	4.2	
Metropolitan West Total Return Pl	1.3 (82)	9.2 (35)	6.1 (30)	4.9 (60)	4.4 (45)	N/A	4.4 (46)	09/01/2013
Blmbg. Barc. U.S. Aggregate Index	0.7	7.5	5.3	4.4	4.1	3.8	4.0	
IM U.S. Broad Market Core+ Fixed Income (MF) Median	2.0	8.5	5.6	5.1	4.3	4.4	4.3	
BlackRock Strategic Income Opportunities Fund K	4.1 (42)	7.3 (14)	4.8 (19)	4.6 (41)	N/A	N/A	3.8 (21)	11/01/2014
Blmba. Barc. U.S. Aggregate Index	0.7	7.5	5.3	4.4	4.1	3.8	3.8	, - , -
Libor (3 month)	0.1	1.1	1.9	1.5	1.2	0.9	1.3	
IM Alternative Credit Focus (MF) Median	3.9	4.2	3.6	4.3	3.0	2.9	2.9	
Eaton Vance Floating Rate R6	3.8 (36)	2.4 (23)	3.4 (25)	5.1 (14)	3.4 (17)	N/A	3.9 (23)	07/01/2011
S&P/LSTA Leveraged Loan Index	3.8	3.1	4.0	5.2	3.8	4.3	4.3	
IM U.S. Bank Loans (MF) Median	3.5	1.4	2.9	4.0	2.9	3.4	3.4	
BrandywineGLOBAL Global Opportunities Bond IS	10.5 (1)	12.7 (4)	5.4 (26)	6.8 (3)	4.4 (11)	N/A	4.4 (12)	07/01/2011
FTSE World Government Bond Index	2.8	10.1	5.0	4.8	2.8	2.3	2.0	
IM Global Fixed Income (MF) Median	3.6	8.1	4.8	4.8	3.3	3.2	2.9	
Domestic Equity	16.4	19.7	13.3	14.7	11.8	12.8	14.2	01/01/2009
Russell 3000 Index	14.7	20.9	14.5	15.4	12.8	13.8	15.2	
Vanguard Institutional Index Fund Instl	12.1 (48)	18.4 (40)	N/A	N/A	N/A	N/A	14.3 (29)	03/01/2018
S&P 500 Index	12.1	18.4	14.2	15.2	12.9	13.9	14.3	
IM U.S. Large Cap Core Equity (MF) Median	12.0	16.0	12.4	13.6	11.4	12.4	12.6	
T. Rowe Price Equity Income I	21.0 (10)	1.4 (70)	5.3 (61)	10.1 (28)	7.2 (63)	N/A	10.6 (68)	06/01/2012
Russell 1000 Value Index	16.3	2.8	6.1	9.7	8.2	10.5	11.8	
IM U.S. Large Cap Value Equity (MF) Median	15.8	2.6	5.8	9.3	7.6	9.7	11.2	
Harbor Capital Appreciation Ret	12.6 (28)	54.6 (9)	26.9 (10)	22.5 (8)	18.9 (7)	18.4 (8)	14.8 (7)	05/01/2008
Russell 1000 Growth Index	11.4	38.5	23.0	21.0	17.5	17.2	13.7	-,-,-,-
IM U.S. Large Cap Growth Equity (MF) Median	11.1	36.2	22.1	19.0	16.0	15.7	12.3	

Manager Performance Overview

As of December 31, 2020

	QTR	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Glenmede Small Cap Equity Instl	31.6 (23)	16.0 (26)	5.8 (56)	10.1 (54)	N/A	N/A	7.7 (50)	09/01/2014
Russell 2000 Index	31.4	20.0	10.2	13.3	9.3	11.2	10.1	
IM U.S. Small Cap Core Equity (MF) Median	28.4	10.4	6.3	10.3	7.3	9.5	7.7	
International Equity	22.4	27.6	10.0	13.4	8.0	8.2	11.4	01/01/2009
MSCI AC World ex USA (Net)	17.0	10.7	4.9	8.9	4.8	4.9	8.1	
Dodge & Cox International Stock Fund	24.7 (1)	2.1 (53)	0.9 (22)	6.6 (1)	2.9 (1)	4.6 (1)	3.1 (1)	05/01/2008
MSCI AC World ex USA Value (net)	20.4	-0.8	-0.4	5.7	1.7	2.8	1.2	
IM International Large Cap Value Equity (MF) Median	19.7	2.5	0.0	3.9	1.2	3.1	0.4	
Vanguard International Growth Adm	22.3 (2)	59.7 (1)	22.5 (1)	21.8 (1)	14.1 (1)	12.4 (1)	9.1 (1)	05/01/2008
MSCI AC World ex USA Growth (Net)	13.9	22.2	10.0	12.0	7.8	6.9	4.5	
IM International Large Cap Growth Equity (MF) Median	14.7	16.7	8.4	10.1	6.3	6.6	4.5	
Real Estate	10.8	-6.7	0.7	3.0	4.0	4.8	8.5	01/01/2009
Real Estate Composite Benchmark	12.5	-9.1	1.2	3.6	4.5	5.4	8.8	
DFA Global Real Estate Securities I	10.8 (59)	- 6.7 (72)	N/A	N/A	N/A	N/A	- 5.7 (72)	12/01/2019
S&P Global REIT Index (Net)	12.5	-9.1	1.7	3.7	5.4	6.1	-8.7	
IM Global Real Estate (MF) Median	11.6	-4.9	3.6	4.8	5.3	5.8	-4.1	

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. Your performance may differ slightly if the fund was purchased during the previous month. Actual performance is captured at the total plan level.

Mutual fund performance stated above may differ slightly from the current share class's historical performance due to share class exchanges.

Manager Commentary As of December 31, 2020

Manager	Manager Status	Comments
Fixed Income		
Metropolitan West Total Return PI (MWTSX)	Maintain	4Q 2020 - Commentary not available at time of report production.
BlackRock Strategic Income Opportunities Fund K (BSIKX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Eaton Vance Senior Floating Rate R6 (ESBLX)	Maintain	4Q 2020 - Commentary not available at time of report production.
BrandywineGLOBAL Global Opportunities IS (GOBSX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Domestic Equity		
Vanguard Institutional Index Fund Instl (VINIX)	Maintain	In accordance with its objective, the Vanguard Institutional Index Fund sufficiently tracked its index during the quarter.
T. Rowe Price Equity Income I (REIPX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Harbor Capital Appreciation Ret (HNACX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Glenmede Small Cap Equity Instl (GTSCX)	Maintain	4Q 2020 - Commentary not available at time of report production.

Manager Commentary As of December 31, 2020

Manager	Manager Status	Comments
International Equity		
Dodge & Cox International Stock Fund (DODFX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Vanguard International Growth Fund Adm (VWILX)	Maintain	4Q 2020 - Commentary not available at time of report production.
Real Estate		
DFA Global Real Estate Securities I (DFGEX)	Maintain	4Q 2020 - Commentary not available at time of report production.

Estimated Fee Analysis - Town of South Windsor Pension & OPEB Plans

As of December 31, 2020

Manager	Current Target %	Fee Schedule
Metropolitan West Total Return Pl	17.0%	0.38%
BlackRock Strategic Income Opportunities Fund K	5.0%	0.76%
Eaton Vance Floating Rate R6	4.0%	0.72%
BrandywineGLOBAL Global Opportunities Bond IS	4.0%	0.58%
Vanguard Institutional Index Fund Instl	22.0%	0.035%
T. Rowe Price Equity Income I	8.5%	0.54%
Harbor Capital Appreciation Ret	5.5%	0.59%
Glenmede Small Cap Equity Instl	5.0%	0.73%
Dodge & Cox International Stock Fund	12.0%	0.63%
Vanguard International Growth Fund Adm	12.0%	0.33%
DFA Global Real Estate Securities I	5.0%	0.24%
Weighted Average Investment Management Fee		0.40%

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.

Total Plan Performance Summary

Town Account

As of December 31, 2020

Account Reconciliation			South Windsor Blended Benchmark Composition				
	QTR	YTD	Since Inception	Inception Date	Allocation Mandate	Weight (%)	
Total Pension				05/01/2008	Dec-2019		
Beginning Market Value	33,311,906	31,791,356	11,284,955		Blmbg. Barc. U.S. Aggregate Index	30.00	
Net Contributions	-725,615	-156,952	5,917,550		Russell 3000 Index	41.00	
Total Gain/Loss	4,385,470	5,337,356	19,769,256		MSCI AC World ex USA (Net)	24.00	
Ending Market Value	36,971,761	36,971,761	36,971,761		S&P Global REIT Index (Net)	5.00	

Trailing Performance Summary

	OTR	1	3	5	7	10	Since	Inception
	QIK	Year	Years	Years	Years	Years	Inception	Date
Total Pension	13.3	16.7	9.1	10.2	7.4	7.8	6.8	05/01/2008
Blended Benchmark	10.9	13.5	8.7	9.6	7.3	7.9	6.5	
Difference	2.4	3.2	0.4	0.6	0.1	-0.1	0.3	

Calendar Year Performance Summary

	2019	2018	2017	2016	2015	2014	2013	2012
Total Pension	20.1	-7.2	15.8	7.9	-2.4	4.0	15.5	14.0
Blended Benchmark	20.2	-5.8	13.6	8.3	-2.1	5.7	15.0	12.3
Difference	-0.1	-1.4	2.2	-0.4	-0.3	-1.7	0.5	1.7

Manager Investment Gain/Loss Summary

	-	
Town	Account	

	Market Value As of 10/01/2020	Net Flows	Return On Investment	Market Value As of 12/31/2020
Short Term Liquidity	15.010	070.004		
Wells Fargo Government Money Market Fund I	45,946	370,091	11	416,049
Total Short Term Liquidity	45,946	370,091	11	416,049
Fixed Income				
Metropolitan West Total Return Pl	5,511,976	330,000	73,106	5,915,082
BlackRock Strategic Income Opportunities Fund K	1,644,231	55,000	69,039	1,768,269
Eaton Vance Floating Rate R6	1,328,307	30,000	51,111	1,409,418
BrandywineGLOBAL Global Opportunities Bond IS	1,290,786	30,000	136,268	1,457,054
Total Fixed Income	9,775,300	445,000	329,524	10,549,824
Domestic Equity				
Vanguard Institutional Index Fund Instl	7,328,288	-55,000	886,121	8,159,409
T. Rowe Price Equity Income I	2,710,374	-170,000	563,978	3,104,352
Harbor Capital Appreciation Instl	2,004,827	-150,000	242,580	2,097,407
Glenmede Small Cap Equity Instl	1,639,476	-225,000	492,373	1,906,850
Total Domestic Equity	13,682,964	-600,000	2,185,053	15,268,017
International Equity				
Dodge & Cox International Stock Fund	2,587,113	1,080,000	723,241	4,390,354
Vanguard International Growth Fund Adm	3,963,727	-235,000	841,909	4,570,636
Vanguard International Explorer Inv	1,604,466	-1,735,707	131,241	-
Total International Equity	8,155,306	-890,707	1,696,392	8,960,991
Real Estate				
DFA Global Real Estate Securities I	1,652,390	-50,000	174,490	1,776,880
Total Real Estate	1,652,390	-50,000	174,490	1,776,880
Total Pension	33,311,906	-725,615	4,385,470	36,971,761
Market Value & Flow Summary

Town Account

Since Inception Ending December 31, 2020

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Mar-2008	-	-	-	9,344,386	N/A
Jun-2008	9,344,386	1,955,522	-569,111	10,730,796	0.00
Sep-2008	10,730,796	697,879	-948,692	10,479,983	-8.27
Dec-2008	10,479,983	-114,417	-1,298,704	9,066,862	-12.26
Mar-2009	9,066,862	-137,136	-520,768	8,408,959	-5.92
Jun-2009	8,408,959	-133,434	1,181,342	9,456,867	14.09
Sep-2009	9,456,867	826,045	1,207,250	11,490,163	12.29
Dec-2009	11,490,163	-139,190	441,824	11,792,797	3.89
Mar-2010	11,792,797	-153,487	434,247	12,073,557	3.73
Jun-2010	12,073,557	-162,768	-831,519	11,079,269	-6.93
Sep-2010	11,079,269	1,185,136	1,084,532	13,348,938	9.16
Dec-2010	13,348,938	-147,744	846,453	14,047,647	6.36
Mar-2011	14,047,647	-131,481	411,396	14,327,563	2.94
Jun-2011	14,327,563	-123,313	160,249	14,364,499	1.11
Sep-2011	14,364,499	1,266,890	-1,738,662	13,892,727	-11.09
Dec-2011	13,892,727	-183,156	786,607	14,496,178	5.65
Mar-2012	14,496,178	-182,239	1,298,153	15,612,093	8.97
Jun-2012	15,612,093	-171,911	-376,972	15,063,210	-2.41
Sep-2012	15,063,210	1,476,385	847,196	17,386,791	5.15
Dec-2012	17,386,791	-252,408	333,610	17,467,992	1.94
Mar-2013	17,467,992	-293,971	816,949	17,990,970	4.70
Jun-2013	17,990,970	-239,737	-188,786	17,562,448	-1.07
Sep-2013	17,562,448	1,606,134	1,050,902	20,219,484	5.92
Dec-2013	20,219,484	-316,744	1,065,219	20,967,959	5.29
Mar-2014	20,967,959	-505,578	303,234	20,765,616	1.47
Jun-2014	20,765,616	-291,092	798,452	21,272,976	3.87
Sep-2014	21,272,976	1,406,580	-439,925	22,239,631	-1.91
Dec-2014	22,239,631	-323,798	129,380	22,045,213	0.57
Mar-2015	22,045,213	-251,275	431,884	22,225,822	1.97
Jun-2015	22,225,822	-295,925	-61,729	21,868,168	-0.29
Sep-2015	21,868,168	1,391,737	-1,515,555	21,744,350	-6.47
Dec-2015	21,744,350	-354,313	566,875	21,956,912	2.59
Mar-2016	21,956,912	-509,341	200,550	21,648,121	1.00

Net cash flows excluding investment management fees paid may differ from gross cash flow figures shown elsewhere in this report.

Market Value & Flow Summary

Town Account

Since Inception Ending December 31, 2020

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Jun-2016	21,648,121	-362,242	428,492	21,714,371	1.98
Sep-2016	21,714,371	1,483,667	913,141	24,111,179	4.22
Dec-2016	24,111,179	-313,450	129,851	23,927,579	0.55
Mar-2017	23,927,579	-349,972	1,067,963	24,645,570	4.48
Jun-2017	24,645,570	-389,788	638,591	24,894,373	2.60
Sep-2017	24,894,373	1,518,198	1,078,840	27,491,412	4.13
Dec-2017	27,491,412	-481,014	1,012,562	28,022,960	3.70
Mar-2018	28,022,960	-432,912	-72,934	27,517,114	-0.29
Jun-2018	27,517,114	-440,062	244,500	27,321,551	0.89
Sep-2018	27,321,551	1,487,458	473,055	29,282,065	1.68
Dec-2018	29,282,065	-813,522	-2,706,961	25,761,582	-9.32
Mar-2019	25,761,582	-430,446	2,299,142	27,630,278	8.95
Jun-2019	27,630,278	442,245	777,147	28,849,669	2.75
Sep-2019	28,849,669	1,236,349	65,505	30,151,523	0.22
Dec-2019	30,151,523	-462,997	2,102,830	31,791,356	7.02
Mar-2020	31,791,356	-484,839	-5,352,542	25,953,975	-17.01
Jun-2020	25,953,975	16,536	4,345,383	30,315,894	16.83
Sep-2020	30,315,894	1,036,967	1,959,045	33,311,906	6.24
Dec-2020	33,311,906	-725,615	4,385,470	36,971,761	13.30

Net cash flows excluding investment management fees paid may differ from gross cash flow figures shown elsewhere in this report.

Risk vs. Reward

Town Account As of December 31, 2020

3 Year Risk and Return



7 Year Risk and Return





Since Inception Risk and Return



5 Year Risk and Return

MPT Statistical Data

Town Account 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 Pension	9.14	14.16	9.30	0.57	0.28	2.08	0.99	1.11	-0.44
South Windsor Blended Benchmark	8.73	12.67	8.32	0.59	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	1.61	0.27	0.00	N/A	-0.59	12.79	0.20	-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 Pension	10.19	11.52	7.43	0.79	0.38	1.80	0.98	1.11	-0.36
South Windsor Blended Benchmark	9.59	10.32	6.64	0.82	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	1.18	0.27	0.01	N/A	-0.82	10.41	0.10	-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 Pension	7.40	10.56	6.77	0.65	0.13	1.60	0.99	1.10	-0.54
South Windsor Blended Benchmark	7.28	9.52	6.07	0.69	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	0.85	0.27	0.01	N/A	-0.69	9.58	0.04	-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
6.76	11.60	7.82	0.57	0.20	1.54	0.98	1.03	0.10	05/01/2008
6.48	11.17	7.68	0.56	N/A	0.00	1.00	1.00	0.00	05/01/2008
0.60	0.25	0.01	N/A	-0.56	11.23	0.06	-0.01	0.63	05/01/2008
	Return 6.76 6.48 0.60	Standard Deviation 6.76 11.60 6.48 11.17 0.60 0.25	Standard Deviation Downside Risk 6.76 11.60 7.82 6.48 11.17 7.68 0.60 0.25 0.01	ReturnStandard DeviationDownside RiskSharpe Ratio6.7611.607.820.576.4811.177.680.560.600.250.01N/A	ReturnStandard DeviationDownside RiskSharpe RatioInformation Ratio6.7611.607.820.570.206.4811.177.680.56N/A0.600.250.01N/A-0.56	Standard Deviation Downside Risk Sharpe Ratio Information Ratio Tracking Error 6.76 11.60 7.82 0.57 0.20 1.54 6.48 11.17 7.68 0.56 N/A 0.00 0.60 0.25 0.01 N/A -0.56 11.23	ReturnStandard DeviationDownside RiskSharpe RatioInformation RatioTracking ErrorR-Squared6.7611.607.820.570.201.540.986.4811.177.680.56N/A0.001.000.600.250.01N/A-0.5611.230.06	Return Standard Deviation Downside Risk Sharpe Ratio Information Ratio Tracking Error R-Squared Beta 6.76 11.60 7.82 0.57 0.20 1.54 0.98 1.03 6.48 11.17 7.68 0.56 N/A 0.00 1.00 1.00 0.60 0.25 0.01 N/A -0.56 11.23 0.06 -0.01	Return Standard Deviation Downside Risk Sharpe Ratio Information Ratio Tracking Error R-Squared Beta Alpha 6.76 11.60 7.82 0.57 0.20 1.54 0.98 1.03 0.10 6.48 11.17 7.68 0.56 N/A 0.00 1.00 1.00 0.00 0.60 0.25 0.01 N/A -0.56 11.23 0.06 -0.01 0.63

Market Capture Report

Town Account As of December 31, 2020

Up/Down Markets - 3 Years



Up Market Capture Ratio





Up/Down Markets - 5 Years



Down Market Capture Ratio

Total Plan Performance Summary

Board of Education Account

As of December 31, 2020

Account Reconciliation					South Windsor Blended Benchmark Comp	osition
	QTR	YTD	Since Inception	Inception Date	Allocation Mandate	Weight (%)
SW BOE Total Pension				05/01/2008	Dec-2019	
Beginning Market Value	15,421,368	15,961,138	6,280,589		Blmbg. Barc. U.S. Aggregate Index	30.00
Net Contributions	-214,721	-1,139,841	1,387,169		Russell 3000 Index	41.00
Total Gain/Loss	2,018,157	2,403,508	9,557,046		MSCI AC World ex USA (Net)	24.00
Ending Market Value	17,224,804	17,224,804	17,224,804		S&P Global REIT Index (Net)	5.00

Trailing Performance Summary

	QTR	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
SW BOE Total Pension	13.2	16.6	9.2	10.3	7.4	7.8	6.7	05/01/2008
Blended Benchmark	10.9	13.5	8.7	9.6	7.3	7.9	6.5	
Difference	2.3	3.1	0.5	0.7	0.1	-0.1	0.2	

Calendar Year Performance Summary

	2019	2018	2017	2016	2015	2014	2013	2012
SW BOE Total Pension	20.3	-7.1	15.8	8.0	-2.5	3.9	15.5	14.1
Blended Benchmark	20.2	-5.8	13.6	8.3	-2.1	5.7	15.0	12.3
Difference	0.1	-1.3	2.2	-0.3	-0.4	-1.8	0.5	1.8

Manager Investment Gain/Loss Summary Board of Education Account

	Market Value As of 10/01/2020	Net Flows	Return On Investment	Market Value As of 12/31/2020
Short Term Liquidity				
Wells Fargo Government Money Market Fund I	171,413	47,882	6	219,300
Total Short Term Liquidity	171,413	47,882	6	219,300
Fixed Income				
Metropolitan West Total Return Pl	2,559,623	170,000	34,083	2,763,707
BlackRock Strategic Income Opportunities Fund K	758,225	35,000	32,025	825,250
Eaton Vance Floating Rate R6	610,975	20,000	23,610	654,585
BrandywineGLOBAL Global Opportunities Bond IS	595,939	20,000	63,188	679,127
Total Fixed Income	4,524,762	245,000	152,906	4,922,669
Domestic Equity				
Vanguard Institutional Index Fund Instl	3,553,936	-205,000	418,867	3,767,803
T. Rowe Price Equity Income I	1,127,511	75,000	241,854	1,444,364
Harbor Capital Appreciation Ret	914,273	-40,000	112,046	986,319
Glenmede Small Cap Equity Instl	734,135	-65,000	226,318	895,452
Total Domestic Equity	6,329,854	-235,000	999,084	7,093,938
International Equity				
Dodge & Cox International Stock Fund	1,261,126	435,000	345,987	2,042,113
Vanguard International Growth Fund Adm	1,604,594	145,000	376,773	2,126,367
Vanguard International Explorer Inv	769,648	-832,603	62,955	-
Total International Equity	3,635,368	-252,603	785,715	4,168,480
Real Estate				
DFA Global Real Estate Securities I	759,972	-20,000	80,446	820,417
Total Real Estate	759,972	-20,000	80,446	820,417
BOE Total Pension	15,421,368	-214,721	2,018,157	17,224,804

Market Value & Flow Summary

Board of Education Account

Since Inception Ending December 31, 2020

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Mar-2008		-	-	5,208,345	N/A
Jun-2008	5,208,345	1,141,755	-250,478	6,099,622	0.0
Sep-2008	6,099,622	216,801	-524,438	5,791,985	-8.3
Dec-2008	5,791,985	-31,398	-702,507	5,058,081	-12.2
Mar-2009	5,058,081	-37,213	-286,879	4,733,989	-5.8
Jun-2009	4,733,989	242,805	376,205	5,353,000	13.9
Sep-2009	5,353,000	385,942	665,609	6,404,550	12.1
Dec-2009	6,404,550	-24,664	243,997	6,623,883	3.9
Mar-2010	6,623,883	-39,426	243,494	6,827,951	3.7
Jun-2010	6,827,951	-50,127	-484,235	6,293,588	-7.1
Sep-2010	6,293,588	329,560	605,884	7,229,032	9.3
Dec-2010	7,229,032	-48,044	472,358	7,653,347	6.5
Mar-2011	7,653,347	-77,449	237,546	7,813,444	3.1
Jun-2011	7,813,444	-54,765	79,726	7,838,405	1.0
Sep-2011	7,838,405	451,754	-948,552	7,341,607	-11.6
Dec-2011	7,341,607	169,040	410,109	7,920,757	5.6
Mar-2012	7,920,757	-165,591	713,824	8,468,990	9.1
Jun-2012	8,468,990	-81,937	-209,000	8,178,054	-2.5
Sep-2012	8,178,054	439,061	445,295	9,062,411	5.2
Dec-2012	9,062,411	-33,099	175,321	9,204,632	1.9
Mar-2013	9,204,632	-13,036	431,049	9,622,646	4.7
Jun-2013	9,622,646	-75,336	-96,173	9,451,137	-1.0
Sep-2013	9,451,137	26,210	558,089	10,035,436	5.9
Dec-2013	10,035,436	-116,319	530,324	10,449,440	5.3
Mar-2014	10,449,440	-124,551	156,347	10,481,236	1.5
Jun-2014	10,481,236	629,493	405,442	11,516,171	3.8
Sep-2014	11,516,171	-94,970	-222,411	11,198,790	-2.0
Dec-2014	11,198,790	-84,399	67,767	11,182,157	0.6
Mar-2015	11,182,157	-139,316	220,741	11,263,582	2.0
Jun-2015	11,263,582	165,200	-31,541	11,397,241	-0.3
Sep-2015	11,397,241	-117,368	-740,898	10,538,976	-6.5
Dec-2015	10,538,976	-106,584	274,539	10,706,931	2.6
Mar-2016	10,706,931	-116,594	102,451	10,692,788	1.0

Market Value & Flow Summary

Board of Education Account

Since Inception Ending December 31, 2020

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Jun-2016	10,692,788	437,737	220,420	11,350,945	2.1
Sep-2016	11,350,945	213,137	480,552	12,044,634	4.2
Dec-2016	12,044,634	-233,499	60,695	11,871,831	0.5
Mar-2017	11,871,831	-136,358	527,503	12,262,975	4.5
Jun-2017	12,262,975	91,692	317,843	12,672,510	2.6
Sep-2017	12,672,510	30,528	538,150	13,241,188	4.2
Dec-2017	13,241,188	-177,489	485,887	13,549,587	3.7
Mar-2018	13,549,587	-157,874	-27,979	13,363,734	-0.2
Jun-2018	13,363,734	236,854	113,984	13,714,571	0.9
Sep-2018	13,714,571	-95,497	245,878	13,864,953	1.8
Dec-2018	13,864,953	-203,587	-1,282,502	12,378,864	-9.3
Mar-2019	12,378,864	-189,071	1,099,739	13,289,532	8.9
Jun-2019	13,289,532	184,668	384,140	13,858,340	2.9
Sep-2019	13,858,340	965,257	49,871	14,873,468	0.3
Dec-2019	14,873,468	41,714	1,045,956	15,961,138	7.0
Mar-2020	15,961,138	-459,489	-2,708,227	12,793,421	-17.2
Jun-2020	12,793,421	-247,419	2,165,403	14,711,405	17.0
Sep-2020	14,711,405	-218,211	928,175	15,421,368	6.3
Dec-2020	15,421,368	-214,721	2,018,157	17,224,804	13.2

Risk vs. Return

Board of Education Account As of December 31, 2020

3 Year Risk and Return



7 Year Risk and Return





Since Inception Risk and Return



5 Year Risk and Return

MPT Statistical Data

Board of Education Account 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
BOE Total Pension	9.24	14.27	9.39	0.58	0.32	2.13	0.99	1.12	-0.41
South Windsor Blended Benchmark	8.73	12.67	8.32	0.59	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	1.61	0.27	0.00	N/A	-0.59	12.79	0.20	-0.01	1.70

5 Year Historical MPT Statistics

	Return	Standard Deviation	Downside Risk	Sharpe Ratio	Information Ratio	Tracking Error	R-Squared	Beta	Alpha
BOE Total Pension	10.27	11.59	7.49	0.80	0.42	1.83	0.99	1.11	-0.35
South Windsor Blended Benchmark	9.59	10.32	6.64	0.82	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	1.18	0.27	0.01	N/A	-0.82	10.41	0.10	-0.01	1.27
									ļ

7 Year Historical MPT Statistics

	Return	Standard Deviation	Downside Risk	Sharpe Ratio	Information Ratio	Tracking Error	R-Squared	Beta	Alpha
BOE Total Pension	7.44	10.62	6.82	0.65	0.16	1.63	0.99	1.11	-0.55
South Windsor Blended Benchmark	7.28	9.52	6.07	0.69	N/A	0.00	1.00	1.00	0.00
90 Day U.S. Treasury Bill	0.85	0.27	0.01	N/A	-0.69	9.58	0.04	-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
BOE Total Pension	6.73	11.64	7.86	0.57	0.18	1.58	0.98	1.03	0.06	05/01/2008
South Windsor Blended Benchmark	6.48	11.17	7.68	0.56	N/A	0.00	1.00	1.00	0.00	05/01/2008
90 Day U.S. Treasury Bill	0.60	0.25	0.01	N/A	-0.56	11.23	0.06	-0.01	0.63	05/01/2008

Market Capture Report

Board of Education Account As of December 31, 2020

Up/Down Markets - 3 Years



Up Market Capture Ratio







Down Market Capture Ratio



Total Plan Performance Summary

South Windsor OPEB

As of December 31, 2020

Account Reconciliation		South Windsor OPEB Blended Benchmark Composition				
	QTR	YTD	Since Inception	Inception Date	Allocation Mandate	Weight (%)
Total Plan				09/01/2018	Dec-2019	
Beginning Market Value	3,583,730	3,157,110	2,682,652		Blmbg. Barc. U.S. Aggregate Index	30.00
Net Contributions	-1,089	315,247	534,334		Russell 3000 Index	41.00
Total Gain/Loss	473,480	583,765	839,135		MSCI AC World ex USA (Net)	24.00
Ending Market Value	4,056,121	4,056,121	4,056,121		S&P Global REIT Index (Net)	5.00

Trailing Performance Summary

OTP	1	3	5	7	10	Since	Inception
QIK	Year	Years	Years	Years	Years	Inception	Date
13.2	16.9	N/A	N/A	N/A	N/A	10.9	09/01/2018
10.9	13.5	N/A	N/A	N/A	N/A	10.2	
2.3	3.4	N/A	N/A	N/A	N/A	0.7	
	QTR 13.2 10.9 2.3	QTR 1 Year 13.2 16.9 10.9 13.5 2.3 3.4	QTR 1 3 Year Years 13.2 16.9 N/A 10.9 13.5 N/A 2.3 3.4 N/A	QTR 1 3 5 Year Years Years 13.2 16.9 N/A N/A 10.9 13.5 N/A N/A 2.3 3.4 N/A N/A	QTR 1 3 5 7 Year Years Years Years Years 13.2 16.9 N/A N/A N/A 10.9 13.5 N/A N/A N/A 2.3 3.4 N/A N/A N/A	QTR 1 3 5 7 10 Year Years Years Years Years Years 13.2 16.9 N/A N/A N/A N/A 10.9 13.5 N/A N/A N/A N/A 2.3 3.4 N/A N/A N/A N/A	QTR 1 3 5 7 10 Since Inception 13.2 16.9 N/A N/A N/A N/A 10.9 10.9 13.5 N/A N/A N/A N/A 10.2 2.3 3.4 N/A N/A N/A N/A 0.7

Calendar Year Performance Summary

	2019	2018	2017	2016	2015	2014	2013	2012
Total Plan	20.3	N/A						
South Windsor OPEB Blended Benchmark	20.2	N/A						
Difference	0.1	N/A						

Manager Investment Gain/Loss Summary

South Windsor C	PEB
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	Market Value As of 10/01/2020	Net Flows	Return On Investment	Market Value As of 12/31/2020
Short Term Liquidity				
Wells Fargo Adv Money Market	28,742	-260	1	28,483
Short Term Liquidity	28,742	-260	1	28,483
Fixed Income				
Metropolitan West Total Return Pl	594,841	47,000	7,981	649,822
BlackRock Strategic Income Opportunities Fund K	176,691	10,000	7,499	194,190
Eaton Vance Floating Rate R6	142,808	7,000	5,556	155,364
BrandywineGLOBAL Global Opportunities IS	138,644	7,000	14,805	160,449
Fixed Income	1,052,984	71,000	35,841	1,159,826
Domestic Equity				
Vanguard Institutional Index Fund Instl	769,592	12,000	94,137	875,730
T. Rowe Price Equity Income I	284,047	-	59,549	343,596
Harbor Capital Appreciation Ret	249,152	-45,000	27,168	231,320
Glenmede Small Cap Equity Instl	172,648	-10,000	53,343	215,991
Domestic Equity	1,475,439	-43,000	234,198	1,666,637
International Equity				
Dodge & Cox International Stock Fund	282,843	132,000	79,421	494,265
Vanguard International Growth Adm	402,386	17,000	91,540	510,926
Vanguard International Explorer Inv	164,383	-177,829	13,446	-
International Equity	849,612	-28,829	184,408	1,005,191
Real Estate				
DFA Global Real Estate Securities I	176,952	-	19,032	195,985
Real Estate	176,952	-	19,032	195,985
Total Plan	3,583,730	-1,089	473,480	4,056,121

Market Value & Flow Summary

Since inception Ending December 31, 2020							
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return		
Sep-2018	-	-	-	2,680,516	N/A		
Dec-2018	2,680,516	-788	-252,821	2,426,907	-9.4		
Mar-2019	2,426,907	-439	216,464	2,642,932	8.9		
Jun-2019	2,642,932	-587	73,890	2,716,235	2.8		
Sep-2019	2,716,235	226,303	10,679	2,953,216	0.4		
Dec-2019	2,953,216	-5,164	209,057	3,157,110	7.1		
Mar-2020	3,157,110	-885	-543,878	2,612,346	-17.2		
Jun-2020	2,612,346	-24,955	447,819	3,035,209	17.2		
Sep-2020	3,035,209	342,176	206,344	3,583,730	6.4		
Dec-2020	3,583,730	-1,089	473,480	4,056,121	13.2		

Metropolitan West Total Return Bond Pl

As of December 31, 2020



3 Year Rolling Percentile Ranking vs. IM U.S. Broad Market Core+ Fixed Income (MF)



3 Year Rolling Under/Over Performance vs. Blmbg. Barc. U.S. Aggregate Index



Metropolitan West Total Return Bond Pl

As of December 31, 2020



Style Map - 3 Years



MPT Statistics vs. Blmbg. Barc. U.S. Aggregate Index							
	3	5					
	Years	Years					
Return	6.1	4.9					
Standard Deviation	3.5	3.1					
vs. Blmbg. Barc. U.S. Aggregate Index							
Alpha	0.6	0.5					
Beta	1.0	1.0					
R-Squared	1.0	1.0					
Consistency	66.7	58.3					
Up Market Capture	108.7	102.8					
Down Market Capture	95.4	88.9					
vs. 90 Day U.S. Treasury Bill							
Sharpe Ratio	1.3	1.2					

Metropolitan West Total Return Bond Pl

Report Date December 31, 2020

Mutual Fund Infor	nation		
Fund Name :	Metropolitan West Funds: MetWest Total Return Bond Fund; Plan Class Shares	Portfolio Assets :	\$89,354 Million
Fund Family :	Metropolitan West Asset Management LLC	Fund Assets :	\$25,703 Million
Ticker :	MWTSX	Portfolio Manager :	Team Managed
Inception Date :	07/29/2011	PM Tenure :	
Portfolio Turnover :	405%		

Fund Investment Policy

The Fund seeks to maximize long-term total return. The Fund invests at least 80% of its net assets in investment grade fixed income securities or unrated securities that are determined by the Adviser to be of similar quality. Up to 20% of the Funds net assets may be invested in securities rated below investment grade.



Maturity Distribution as of 06/30/20



Quality Allocation as of 06/30/20



BlackRock Strategic Income Opportunities Fund K

As of December 31, 2020







3 Year Rolling Under/Over Performance vs. Blmbg. Barc. U.S. Aggregate Index



BlackRock Strategic Income Opportunities Fund K As of December 31, 2020



Style Map - 3 Years



MPT Statistics vs. Blmbg. Barc. U.S. Aggregate Index					
	3	5			
	Years	Years			
Return	4.8	N/A			
Standard Deviation	5.1	N/A			
vs. Blmbg. Barc. U.S. Aggregate Index					
Alpha	2.3	N/A			
Beta	0.5	N/A			
R-Squared	0.1	N/A			
Consistency	66.7	N/A			
Up Market Capture	82.3	N/A			
Down Market Capture	61.0	N/A			
vs. 90 Day U.S. Treasury Bill					
Sharpe Ratio	0.6	N/A			

BlackRock Strategic Income Opportunities Fund K

Report Date December 31, 2020

Mutual Fund Inform	nation		
Fund Name :	BlackRock Funds V: BlackRock Strategic Income Opportunities Portfolio; Class K Shares	Portfolio Assets :	\$32,572 Million
Fund Family :	BlackRock Inc	Fund Assets :	\$8,164 Million
Ticker :	BSIKX	Portfolio Manager :	Rieder/Miller/Rogal
Inception Date :	03/28/2016	PM Tenure :	201620162017
Portfolio Turnover :	1,805%		

Fund Investment Policy

The Fund seeks total return as is consistent with the preservation of capital. The Fund will invest opportunistically across the spectrum of fixed income sectors and securities. Allocations to all sectors are unconstrained and the fund may invest in non-investment-grade, non-dollar-denominated and emerging markets.

Asset Allocation as of 06/30/20		Top 10 Securities as of 06/30/20		Fixed Income Characteristics as of 06/30/20			
]	iShares iBoxx \$ High Yield Corporate	1.5 %	Avg. Coupon	3.46 %
Fixed Income		9	8.5%	BlackRock Liquidity T-Fund;Institutional	1.4 %	Nominal Maturity	N/A
		2 70/		BlackRock Liquid Environmentally	1.2 %	Effective Maturity	8.04 Years
Equities – 3.7%		Invesco QQQ Trust Series 1	0.9 %	Duration	3.26 Years		
Other -		0.5%		iShares iBoxx \$ Inv Grade Corporate	0.2 %	SEC 30 Day Yield	N/A
		Taiwan Semiconductor Manufacturing	0.2 %	Avg. Credit Quality	BBB		
Convertibles -		0.0%		Apple Inc ORD	0.2 %		
				Industrial Select Sector SPDR Fund	0.1 %		
Cash –	-2.8 %			iShares MSCI Emerging Markets ETF	0.1 %		
	•		1	Financial Select Sector SPDR Fund	0.1 %		

Maturity Distribution as of 06/30/20



Quality Allocation as of 06/30/20



Eaton Vance Floating Rate R6

As of December 31, 2020



3 Year Rolling Percentile Ranking vs. IM U.S. Bank Loans (MF)



3 Year Rolling Under/Over Performance vs. S&P/LSTA Leveraged Loan Index



Eaton Vance Floating Rate R6

As of December 31, 2020



Style Map - 3 Years



MPT Statistics vs. S&P/LSTA Leveraged Loan Index					
	3	5			
	Years	Years			
Return	3.4	N/A			
Standard Deviation	7.9	N/A			
vs. S&P/LSTA Leveraged Loan Index					
Alpha	-0.2	N/A			
Beta	0.9	N/A			
R-Squared	1.0	N/A			
Consistency	50.0	N/A			
Up Market Capture	90.1	N/A			
Down Market Capture	93.3	N/A			
vs. 90 Day U.S. Treasury Bill					
Sharpe Ratio	0.3	N/A			

Eaton Vance Floating Rate R6

Report Date December 31, 2020

Mutual Fund Inform	nation		
Fund Name :	Eaton Vance Mutual Funds Trust: Eaton Vance Floating-Rate Fund; Class R6 Shares	Portfolio Assets :	\$4,975 Million
Fund Family :	Eaton Vance Management	Fund Assets :	\$395 Million
Ticker :	ESBLX	Portfolio Manager :	Russ/Sveen
Inception Date :	12/01/2016	PM Tenure :	20162019
Portfolio Turnover :	16%		

Fund Investment Policy

The Fund seeks to provide a high level of current income. To do so, the Fund invests primarily in senior secured floating rate loans and high yield, high risk corporate bonds. The Fund invests at least 65% of its assets in debt obligations issued in connection with corporations who are restructuring.





Quality Allocation as of 09/30/19



BrandywineGLOBAL Global Opportunities IS

As of December 31, 2020







3 Year Rolling Under/Over Performance vs. FTSE World Government Bond Index



BrandywineGLOBAL Global Opportunities IS

As of December 31, 2020



Style Map - 3 Years



MPT Statistics vs. FTSE World Government Bond Index					
	3	5			
	Years	Years			
Return	5.4	6.8			
Standard Deviation	10.3	9.5			
vs. FTSE World Government Bond Index					
Alpha	-1.3	1.1			
Beta	1.4	1.2			
R-Squared	0.4	0.5			
Consistency	44.4	50.0			
Up Market Capture	165.6	150.6			
Down Market Capture	222.9	155.4			
vs. 90 Day U.S. Treasury Bill					
Sharpe Ratio	0.4	0.6			

BrandywineGLOBAL Global Opportunities IS

Report Date December 31, 2020

Mutual Fund Inforr	nation		
Fund Name :	Legg Mason Global Asset Management Trust: BrandywineGLOBAL - Global Opportunities Bond Fund; Class IS Shares	Portfolio Assets :	\$2,122 Million
Fund Family :	Franklin Templeton Investments	Fund Assets :	\$1,282 Million
Ticker :	GOBSX	Portfolio Manager :	Team Managed
Inception Date :	11/01/2006	PM Tenure :	
Portfolio Turnover :	103%		

Fund Investment Policy

The Fund seeks to maximize total return consisting of income and capital appreciation. The Fund invests at least 80% of its net assets in fixed income securities of issuers located in developed market countries; it will normally hold a portfolio of fixed income securities of issuers located in a minimum of six countries.



Maturity Distribution as of 06/30/20



Quality Allocation as of 06/30/20



Vanguard Institutional Index Fund Instl

As of December 31, 2020





3 Year Rolling Percentile Ranking vs. IM U.S. Large Cap Core Equity (MF)



3 Year Rolling Under/Over Performance vs. S&P 500 Index



Vanguard Institutional Index Fund Instl As of December 31, 2020



Style Map - 3 Years



MPT Statistics vs. S&P 500 Index

	3	5
	Years	Years
Return	14.2	15.2
Standard Deviation	18.5	15.1
vs. S&P 500 Index		
Alpha	0.0	0.0
Beta	1.0	1.0
R-Squared	1.0	1.0
Consistency	19.4	18.3
Up Market Capture	100.0	99.9
Down Market Capture	100.0	100.0
vs. 90 Day U.S. Treasury Bill		
Sharpe Ratio	0.7	0.9

Vanguard Institutional Index Fund Instl

Report Date December 31, 2020

Mutual Fund Inforr	nation		
Fund Name :	Vanguard Institutional Index Fund: Vanguard Institutional Index Fund; Institutional Shares	Portfolio Assets :	\$249,517 Million
Fund Family :	Vanguard Group Inc	Fund Assets :	\$116,844 Million
Ticker :	VINIX	Portfolio Manager :	Butler/Louie
Inception Date :	07/31/1990	PM Tenure :	20002017
Portfolio Turnover :	4%		
Fund Investment P	blicy		

The Fund seeks to track the performance of a benchmark index that measures the investment return of large-capitalization stocks. The Fund employs an indexing investment approach designed to track the performance of the Standard & Poors 500 Index by investing all of its assets in the stocks that make up the Index.



l					- F
			I	1	V
Equity Characte	eristics as of 09	9/30/20			
Total Securities		5	10		
Avg. Market Cap	I Contraction of the second	\$	443,563 Million		
P/E		3	4.1		
P/B		1	0.4		
Div. Yield		2	.3%		
Annual EPS		1	1.8		
5Yr EPS		1	5.1		
3Yr EPS Growth		1	8.5		

Top 10 Securities as of 09/30/20	
Apple Inc ORD	6.7 %
Microsoft Corp ORD	5.8 %
Amazon.com Inc ORD	4.9 %
Facebook Inc ORD	2.3 %
Alphabet Inc ORD 1	1.6 %
Alphabet Inc ORD 2	1.6 %
Berkshire Hathaway Inc ORD	1.5 %
Johnson & Johnson ORD	1.4 %
Procter & Gamble Co ORD	1.3 %
Visa Inc ORD	1.2 %

Sector Allocation as of 09/30/20



T. Rowe Price Equity Income

As of December 31, 2020









3 Year Rolling Under/Over Performance vs. Russell 1000 Value Index



T. Rowe Price Equity Income

As of December 31, 2020



Style Map - 3 Years



MADT	Statistics	VC DUCC	all 1000	Value Index	
	Statistics	vs. Russ		value muex	

	3	5
	Years	Years
Return	5.2	10.0
Standard Deviation	20.4	16.8
vs. Russell 1000 Value Index		
Alpha	-0.9	0.1
Beta	1.0	1.0
R-Squared	1.0	1.0
Consistency	44.4	55.0
Up Market Capture	99.9	100.1
Down Market Capture	103.1	97.7
vs. 90 Day U.S. Treasury Bill		
Sharpe Ratio	0.3	0.6

T. Rowe Price Equity Income

Report Date December 31, 2020

Mutual Fund Information

Fund Name :	T Rowe Price Equity Income Fund
Fund Family :	T. Rowe Price Associates Inc
Ticker :	PRFDX
Inception Date :	10/31/1985
Portfolio Turnover :	18%

Portfolio Assets :	\$14,493 Million
Fund Assets :	\$12,287 Million
Portfolio Manager :	John D. Linehan
PM Tenure :	2015

Fund Investment Policy

The Fund seeks a high level of dividend income and long-term capital growth primarily through investments in stocks. The Fund invests at least 80% of its net assets in common stocks, with an emphasis on large-capitalization stocks that have a strong track record of paying dividends or that are believed to be undervalued.



Equity Characteristics as of 06/30/20	
Total Securities	111
Avg. Market Cap	\$101,398 Million
P/E	20.1
P/B	3.9
Div. Yield	3.9%
Annual EPS	22.7
5Yr EPS	6.7
3Yr EPS Growth	13.3

Top 10 Securities as of 06/30/20	
Qualcomm Inc ORD	3.0 %
Wells Fargo & Co ORD	2.7 %
Southern Co ORD	2.6 %
Chubb Ltd ORD	2.2 %
Morgan Stanley ORD	2.2 %
Dupont De Nemours Inc ORD	2.2 %
T Rowe Price Government Money Fund	2.2 %
Total SE ORD	2.1 %
United Parcel Service Inc ORD	2.0 %
Abbvie Inc ORD	2.0 %

Sector Allocation as of 06/30/20



Harbor Capital Appreciation Ret

As of December 31, 2020







3 Year Rolling Under/Over Performance vs. Russell 1000 Growth Index



Harbor Capital Appreciation Ret

As of December 31, 2020



Style Map - 3 Years



MPT Statistics vs. Russell 1000 Growth Index		
	3	5
	Years	Years
Return	26.9	22.5
Standard Deviation	22.1	18.7
vs. Russell 1000 Growth Index		
Alpha	1.2	-0.8
Beta	1.1	1.1
R-Squared	1.0	0.9
Consistency	55.6	55.0
Up Market Capture	111.8	111.8
Down Market Capture	106.4	117.4
vs. 90 Day U.S. Treasury Bill		
Sharpe Ratio	1.1	1.1

Harbor Capital Appreciation Ret

Report Date December 31, 2020

nation		
Harbor Funds: Harbor Capital Appreciation Fund; Retirement Class Shares	Portfolio Assets :	\$39,400 Million
Harbor Capital Advisors Inc	Fund Assets :	\$10,076 Million
HNACX	Portfolio Manager :	Team Managed
03/01/2016	PM Tenure :	
40%		
olicy		
	mation Harbor Funds: Harbor Capital Appreciation Fund; Retirement Class Shares Harbor Capital Advisors Inc HNACX 03/01/2016 40% olicy	mationHarbor Funds: Harbor Capital Appreciation Fund; Retirement Class SharesPortfolio Assets :Harbor Capital Advisors IncFund Assets :HNACXPortfolio Manager :03/01/2016PM Tenure :40%Olicy

The Fund seeks long-term growth of capital through investment in equity securities of larger established companies with above-average prospects for growth.



Equity Characteristics as of 06/30/20	
Total Securities	56
Avg. Market Cap	\$467,543 Million
P/E	46.0
P/B	16.5
Div. Yield	1.0%
Annual EPS	10.2
5Yr EPS	25.2
3Yr EPS Growth	29.5

Top 10 Securities as of 06/30/20	
Amazon.com Inc ORD	7.6 %
Microsoft Corp ORD	6.1 %
Apple Inc ORD	5.8 %
Netflix Inc ORD	4.1 %
Tesla Inc ORD	4.0 %
Facebook Inc ORD	3.6 %
Mastercard Inc ORD	3.3 %
Adobe Inc ORD	3.2 %
NVIDIA Corp ORD	3.0 %
Salesforce.Com Inc ORD	3.0 %

Sector Allocation as of 06/30/20


Glenmede Small Cap Equity Instl

As of December 31, 2020









3 Year Rolling Under/Over Performance vs. Russell 2000 Index



Glenmede Small Cap Equity Instl

As of December 31, 2020



Style Map - 3 Years



MPT Statistics vs.	Russell	2000	Index	

	3	5
	Years	Years
Return	5.8	10.2
Standard Deviation	28.1	23.4
vs. Russell 2000 Index		
Alpha	-4.4	-3.3
Beta	1.1	1.1
R-Squared	1.0	1.0
Consistency	41.7	48.3
Up Market Capture	101.8	100.3
Down Market Capture	114.7	111.9
vs. 90 Day U.S. Treasury Bill		
Sharpe Ratio	0.3	0.5

Glenmede Small Cap Equity Instl Report Date December 31, 2020

Mutual Fund Information

Fund Name :	Glenmede Fund, Inc: Small Cap Equity Portfolio; Institutional Shares	Portfolio Assets :	\$1,238 Million
Fund Family :	Glenmede Investment Management LP	Fund Assets :	\$830 Million
Ticker :	GTSCX	Portfolio Manager :	Colarik/Irving
Inception Date :	01/02/1998	PM Tenure :	20012018
Portfolio Turnover :	54%		

Fund Investment Policy

The Fund seeks to provide long-term appreciation consistent with reasonable risk to principal by investing at least 65% of the value of its total assets in equity securities below the maximum capitalization permitted for a stock in the Russell 2000 Index.



Top 10 Securities as of 07/31/20	
Atlas Air Worldwide Holdings Inc	2.2 %
Entegris Inc ORD	2.0 %
Ciena Corp ORD	2.0 %
Asbury Automotive Group Inc ORD	1.9 %
Penn National Gaming Inc ORD	1.9 %
Neogenomics Inc ORD	1.8 %
II-VI Inc ORD	1.7 %
Energizer Holdings Inc ORD	1.7 %
Vonage Holdings Corp ORD	1.7 %
R1 RCM Inc ORD	1.7 %

Sector Allocation as of 07/31/20



Equity Characteristics as of 07/31/20Total Securities86Aug Market Securities62,230 h

Avg. Market Cap	\$3,229 Million
P/E	28.1
P/B	3.2
Div. Yield	2.8%
Annual EPS	3.6
5Yr EPS	17.0
3Yr EPS Growth	14.3

Dodge & Cox International Stock Fund

As of December 31, 2020



3 Year Rolling Percentile Ranking vs. IM International Large Cap Value Equity (MF)



3 Year Rolling Under/Over Performance vs. MSCI AC World ex USA Value (net)



Dodge & Cox International Stock Fund

As of December 31, 2020



Consistency

Sharpe Ratio

Up Market Capture

Down Market Capture

vs. 90 Day U.S. Treasury Bill

Style Map - 3 Years



MPT Statistics vs. MSCI AC World ex USA Value (net)				
	3	5		
	Years	Years		
Return	0.9	6.6		
Standard Deviation	23.4	19.8		
vs. MSCI AC World ex USA Value (net)				
Alpha	1.8	0.4		
Beta	1.1	1.1		
R-Squared	1.0	1.0		

55.6

117.4

110.9

0.1

55.0

114.3

112.2

0.4

Dodge & Cox International Stock Fund

Report Date December 31, 2020

Mutual Fund Inform	nation		
Fund Name :	Dodge & Cox Funds: Dodge & Cox International Stock Fund	Portfolio Assets :	\$37,954 Million
Fund Family :	Dodge & Cox	Fund Assets :	\$37,954 Million
Ticker :	DODFX	Portfolio Manager :	Team Managed
Inception Date :	05/01/2001	PM Tenure :	
Portfolio Turnover :	15%		

Fund Investment Policy

The Fund seeks long-term growth of principal and income by investing primarily in a diversified portfolio of equity securities issued by non-U.S. companies from at least three different foreign countries, including emerging markets.

Asset Allocatio	on as of (06/30/20	Top 10 Securities as of 06/30/20		Top 5 Countries as of 06/30/20	
			UBS Group AG ORD	3.3 %	United Kingdom	16.2 %
Equities -		99.0%	BNP Paribas SA ORD	3.3 %	Switzerland	15.1 %
		1.0%	Sanofi SA ORD	3.2 %	Japan	12.9 %
Cash =		1.0%	Samsung Electronics Co Ltd PFD	3.1 %	France	11.8 %
Fixed Income		0.3%	Credit Suisse Group AG ORD	2.9 %	China	4.3 %
Tixed meetine			ICICI Bank Ltd ORD	2.6 %	Equity Characteristics as of 06/30/20	
Convertibles -		0.0%	GlaxoSmithKline PLC ORD	2.6 %	Total Securities	80
			Honda Motor Co Ltd ORD	2.6 %	Avg. Market Cap	\$64,399 Million
Other -	-0.4 %		Mitsubishi Electric Corp ORD	2.5 %	P/E	21.2
	L	1	Banco Santander SA ORD	2.4 %	P/B	2.3
				,0	Div. Yield	4.4%

Region Allocation as of 06/30/20



Sector Allocation as of 06/30/20



Annual EPS

4.0

Vanguard International Growth Adm

As of December 31, 2020



3 Year Rolling Percentile Ranking vs. IM International Large Cap Growth Equity (MF)







Vanguard International Growth Adm

As of December 31, 2020



Style Map - 3 Years



MPT Statistics vs. MSCI AC World ex USA Growth (Net)

	3	5
	Years	Years
Return	22.5	21.8
Standard Deviation	21.2	18.2
vs. MSCI AC World ex USA Growth (Net)		
Alpha	9.5	6.6
Beta	1.2	1.2
R-Squared	0.9	0.9
Consistency	69.4	66.7
Up Market Capture	144.7	137.1
Down Market Capture	106.0	104.4
vs. 90 Day U.S. Treasury Bill		
Sharpe Ratio	1.0	1.1

Vanguard International Growth Adm

Report Date December 31, 2020

Mutual Fund Inform	mation		
Fund Name :	Vanguard World Funds: Vanguard International Growth Fund; Admiral Shares	Portfolio Assets :	\$56,562 Million
Fund Family :	Vanguard Group Inc	Fund Assets :	\$46,905 Million
Ticker :	VWILX	Portfolio Manager :	Anderson/Coutts/Webber
Inception Date :	08/13/2001	PM Tenure :	200320162009
Portfolio Turnover :	13%		

Fund Investment Policy

The Fund seeks long-term capital appreciation by investing in equity securities of companies based outside the United States. In selecting stocks, the Fund's advisor evaluates foreign markets around the world and chooses companies with above-average growth potential.

Asset Allocation as of 06/30/20		Top 10 Securities as of 06/30/20	Top 10 Securities as of 06/30/20		Top 5 Countries as of 06/30/20	
			Tencent Holdings Ltd ORD	6.1 %	China	18.4 %
Equities -		98.1%	ASML Holding NV ORD	5.7 %	United States	10.0 %
	2.00/		Alibaba Group Holding Ltd DR	5.2 %	Japan	9.5 %
Other -	3.8%		Tesla Inc ORD	5.1 %	Netherlands	9.3 %
Fixed Income	0.1%		Mercadolibre Inc ORD	4.1 %	Germany	8.2 %
		Vanguard Market Liquidity Fund	3.8 %	Equity Characteristics as of 06/30/20		
Convertibles -	0.0%		Amazon.com Inc ORD	2.7 %	Total Securities	130
			TAL Education Group DR	2.7 %	Avg. Market Cap	\$176,389 Million
Cash -	-2.0 %		Spotify Technology SA ORD	2.7 %	P/E	38.3
			M3 Inc ORD	24%	P/B	10.1
				2.470	Div. Yield	1.8%
					Annual EPS	6.1

Region Allocation as of 06/30/20



Sector Allocation as of 06/30/20



DFA Global Real Estate Securities I

As of December 31, 2020



3 Year Rolling Percentile Ranking vs. IM Global Real Estate (MF)



3 Year Rolling Under/Over Performance vs. S&P Global REIT Index (Net)



DFA Global Real Estate Securities I

As of December 31, 2020



MPT Statistics vs. S&P Global REIT Index (Net)				
	3	5		
	Years	Years		
Return	4.2	5.6		
Standard Deviation	18.5	15.9		
vs. S&P Global REIT Index (Net)				
Alpha	2.4	2.0		
Beta	0.9	0.9		
R-Squared	1.0	1.0		
Consistency	55.6	60.0		
Up Market Capture	99.9	100.5		
Down Market Capture	89.4	89.8		
vs. 90 Day U.S. Treasury Bill				
Sharpe Ratio	0.2	0.4		

DFA Global Real Estate Securities I

Report Date December 31, 2020

Mutual Fund Infor	mation		
Fund Name :	DFA Investment Dimensions Group Inc: DFA Global Real Estate Securities Portfolio	Portfolio Assets :	\$7,489 Million
Fund Family :	Dimensional Fund Advisors LP	Fund Assets :	\$7,489 Million
Ticker :	DFGEX	Portfolio Manager :	Team Managed
Inception Date :	06/04/2008	PM Tenure :	
Portfolio Turnover :	0%		
Fund Investment P	olicy		

The Fund seeks to achieve long-term capital appreciation. The Fund seeks to achieve exposure to a broad portfolio of securities of U.S. and non-U.S. companies in the real estate industry, with a focus on REITs.



Equity Characteristics as of 04/30/20	
Total Securities	158
Avg. Market Cap	\$38,596 Million
P/E	50.9
P/B	6.7
Div. Yield	6.7%
Annual EPS	23.3
5Yr EPS	17.5
3Yr EPS Growth	15.3

Top 10 Securities as of 04/30/20	
DFA International Real Estate Securities	34.7 %
DFA Real Estate Securities Portfolio; Ins	11.5 %
American Tower Corp ORD	5.8 %
Prologis Inc ORD	3.6 %
Crown Castle International Corp	3.6 %
Equinix Inc ORD	3.2 %
SBA Communications Corp ORD	1.8 %
Digital Realty Trust Inc ORD	1.7 %
Public Storage ORD	1.6 %
Equity Residential ORD	1.3 %

Sector Allocation as of 04/30/20



Benchmark Composition

South Windsor Blended Benchmark

As of December 31, 2020

Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%
Dec-2019		Feb-2013	
Blmbg. Barc. U.S. Aggregate Index	30.0	Blmbg. Barc. U.S. Aggregate Index	31.5
Russell 3000 Index	41.0	Russell 3000 Index	38.0
MSCI AC World ex USA (Net)	24.0	MSCI EAFE (Net) Index	15.0
S&P Global REIT Index (Net)	5.0	FTSE EPRA/NAREIT Developed Index (Net)	5.0
Jun-2019		Inflation Protection Index	10.5
Blmbg. Barc. U.S. Aggregate Index	35.0	Jun-2010	
Russell 3000 Index	38.0	Blmbg. Barc. U.S. Aggregate Index	33.3
MSCI AC World ex USA (Net)	22.0	Russell 3000 Index	41.7
FTSE EPRA/NAREIT Developed Index (Net)	5.0	MSCI EAFE (Net) Index	15.0
		FTSE EPRA/NAREIT Developed Index (Net)	5.0
Dec-2017		Inflation Protection Index	5.0
Blmbg. Barc. U.S. Aggregate Index	31.5		
Russell 3000 Index	33.0	Mar-2005	
MSCI AC World ex USA (Net)	20.0	Blmbg. Barc. U.S. Aggregate Index	35.0
FTSE EPRA/NAREIT Developed Index (Net)	5.0	Russell 3000 Index	45.0
Short Term Inflation Protection Index	10.5	MSCI EAFE (Net) Index	15.0
Jan-2014		FTSE EPRA/NAREIT Developed Index (Net)	5.0
Blmbg. Barc. U.S. Aggregate Index	31.5	Jan-1990	
Russell 3000 Index	38.0	Blmbg. Barc. U.S. Aggregate Index	35.0
MSCI AC World ex USA (Net)	15.0	Russell 3000 Index	45.0
FTSE EPRA/NAREIT Developed Index (Net)	5.0	MSCI EAFE (Net) Index	15.0
Short Term Inflation Protection Index	10.5	FTSE EPRA/NAREIT Developed Index	5.0
Oct-2013			
Blmbg. Barc. U.S. Aggregate Index	31.5		
Russell 3000 Index	38.0		
MSCI EAFE (Net) Index	15.0		
FTSE EPRA/NAREIT Developed Index (Net)	5.0		
Short Term Inflation Protection Index	10.5		

As of December 31, 2020

FUND FAMILY	WEB SITE
BlackRock	www.blackrock.com
DFA	www.us.dimensional.com
Dodge & Cox	www.dodgeandcox.com
Eaton Vance	www.eatonvance.com
Glenmede	www.glenmede.com
Harbor	www.harborfunds.com
Legg Mason (BrandywineGLOBAL)	www.leggmason.com
Metropolitan West	www.tcw.com
T. Rowe Price	www.troweprice.com
Vanguard	www.vanguard.com

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Prepared: 12/31/2020

	October 01, 2020 th	rougn December 31, 202	20	
Fund Balance at Beginning of Period			\$	971,975.76
Activity:				
Distributions:				
Participant Distributions	\$	(9,748.62)		
Total Activity				(9,748.62)
Service Fees:				
Deduction of Service Fees		(3,135.01)		
Total Service Fees				(3,135.01)
Investment Return:				
Fixed Income Interest		12,016.14		
Total Investment Return				12,016.14
Fund Balance at End of Period			\$	971,108.27
Annuity Allocation				485,163.31
Unallocated Fund Balance			\$	485,944.96

Note:

1. Fund is shown at Book Value.

- 2. Fixed income interest amount is based on estimated interest rates.
- 3. The Withdrawal Value of the Unallocated Fund Balance is \$595,901.57. This is the amount which was available for withdrawal in a lump sum on the period end date. This amount is stated before assessment of any outstanding service fees, according to the terms of your contract. The Withdrawal Value was calculated using the current basis for computing Market Value Adjustments for contracts of this type.

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Prepared: 12/31/2020

Fix T For the period	Statement of Change xed Income - Regular A own of South Windsor Board of Educa Investment Service A : October 01, 2020 three	es in Fund Account Fund Connecticut ation Account 2 ough December 31, 202	20				
Fund Balance at Beginning of Period			\$	497,493.31			
Activity:							
Distributions:							
Participant Distributions	\$	(1,319.82)					
Total Activity				(1,319.82)			
Service Fees:							
Deduction of Service Fees		(1,300.92)					
Total Service Fees				(1,300.92)			
Investment Return:							
Fixed Income Interest		6,181.63					
Total Investment Return				6,181.63			
Fund Balance at End of Period			\$	501,054.20			
Annuity Allocation				66,109.44			
Unallocated Fund Balance			\$	434,944.76			

Note:

1. Fund is shown at Book Value.

- 2. Fixed income interest amount is based on estimated interest rates.
- 3. The Withdrawal Value of the Unallocated Fund Balance is \$533,361.36. This is the amount which was available for withdrawal in a lump sum on the period end date. This amount is stated before assessment of any outstanding service fees, according to the terms of your contract. The Withdrawal Value was calculated using the current basis for computing Market Value Adjustments for contracts of this type.

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.

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.
- 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.
- 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 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 threafter. 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-tradedfunds 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. The down 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 will over 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 that 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 <u>manager</u> performed if the market's return was zero. A <u>positive</u> alpha implies the manager added value to the return of the portfolio over that of the market. A <u>negative</u> 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 <u>higher</u> 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 report stat 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 you 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.



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

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'I 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

January 1, 2021 Tw enty-Year Forecasted CMAs

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.



INDICES FOR PAST RETURN AND RISK METRICS

Indices used to generate historical risk and return metrics	Most Recent Index	Ind Dat	ex es	Linked Index Ir 1 D		Index Dates		Linked Index 2	Index Dates			Linked Index 2	Inde Date		ex es
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	- 1/3	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	13 BBgBacc Gel Agg Br USD TR Hóg USD &FTSE Texasury Bit 3 Mon USD & BBgBacc US Corporate High Yield TR USD	12/20 -	2/90	BBgBarc US Agg Bond TR USD	1/90	- 1/3	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	- 1/7	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	- 1/7	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	- 1/9	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	- 1/3	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	- 1/7	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	BCI+AGG-CASH	12/95	- 1/9	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	- 1/7	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	- 1/7	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.



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 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 (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.

Helping Clients Prosper.



South Windsor, CT

Portfolio Recommendations - Diversified Real Assets - January 2021

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Town of South Windsor - Town Employee Pension Plan

Cash Flow Worksheet

Objective : 1) Reallocate portfolio to introduce a 3.5% allocation to Principal Diversified Real Assets Fund and allocate portfolio according to optimized portfolio.

Investment Name	Account Number	Ticker	CUSIP	Liquidity	Unreconciled Balance As of: 1/20/2021	Current Allocation	Target Allocation	Proposed Target Allocation	Trade Amount	Resulting Balances	Resulting Allocation
Cash					\$443,120	1.2%	0.0%	0.0%	\$0	\$443,120	1.2%
Cash	9546002136	CASH		Daily	\$443,120	1.2%	0.0%	0.0%		\$443,120	1.2%
Fixed Income					\$10,516,824	27.8%	30.0%	27.5%	(\$240,000)	\$10,276,824	27.2%
Metropolitan West Total Return Bond Pl	9546002136	MWTSX	592905764	Daily T+1	\$5,875,611	15.5%	17.0%	16.5%	\$280,000	\$6,155,611	16.3%
BlackRock Strategic Income Opportunities K	9546002136	BSIKX	09260B374	Daily T+1	\$1,769,973	4.7%	5.0%	7.0%	\$850,000	\$2,619,973	6.9%
Eaton Vance Floating Rate Fund Class R6	9546002136	ESBLX	27826A730	Daily T+1	\$1,423,949	3.8%	4.0%	1.5%	(\$860,000)	\$563,949	1.5%
BrandywineGLOBAL Global Opportunities Bond IS	9546002136	GOBSX	524686318	Daily T+1	\$1,447,292	3.8%	4.0%	2.5%	(\$510,000)	\$937,292	2.5%
Domestic Equity					\$15,637,341	41.4%	41.0%	35.5%	(\$2,380,000)	\$13,257,341	35.1%
Vanguard Institutional Index Instl	9546002136	VINIX	922040100	Daily T+1	\$8,258,364	21.8%	22.0%	16.0%	(\$2,300,000)	\$5,958,364	15.8%
T. Rowe Price Equity Income I	9546002136	REIPX	779547405	Daily T+1	\$3,238,460	8.6%	8.5%	6.5%	(\$800,000)	\$2,438,460	6.5%
Harbor Capital Appreciation Retirement	9546002136	HNACX	411512528	Daily T+1	\$2,099,621	5.6%	5.5%	4.0%	(\$600,000)	\$1,499,621	4.0%
Glenmede Small Cap Equity I	9546002136	GTSCX	378690820	Daily T+1	\$2,040,897	5.4%	5.0%	9.0%	\$1,320,000	\$3,360,897	8.9%
International Equity					\$9,447,899	25.0%	24.0%	28.0%	\$1,010,000	\$10,457,899	27.7%
Dodge & Cox International Stock Fund	9546002136	DODFX	256206103	Daily T+1	\$4,587,267	12.1%	12.0%	14.0%	\$640,000	\$5,227,267	13.8%
Vanguard International Growth Admiral	9546002136	VWILX	921910501	Daily T+1	\$4,860,632	12.9%	12.0%	14.0%	\$370,000	\$5,230,632	13.8%
Alternatives - REIT					\$1,760,351	4.7%	5.0%	5.5%	\$300,000	\$2,060,351	5.4%
DFA Global Real Estate	9546002136	DFGEX	23320G554	Daily T+1	\$1,760,351	4.7%	5.0%	5.5%	\$300,000	\$2,060,351	5.4%
Alternatives - Real Assets					\$0	0.0%	0.0%	3.5%	\$1,310,000	\$1,310,000	3.5%
Principal Diversified Real Asset R6	9546002136	PDARX	74254V166	Daily T+1	\$0	0.0%	0.0%	3.5%	\$1,310,000	\$1,310,000	3.5%
Investment Portfolio Total					\$37,805,535	100.0%	100.0%	100.0%	\$0	\$37,805,535	100.0%

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 responsibility for inaccurate or the 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.

Signature

Date



Town of South Windsor - Board of Education Pension Plan

Cash Flow Worksheet

Objective : 1) Reallocate portfolio to introduce a 3.5% allocation to Principal Diversified Real Assets Fund and allocate portfolio according to optimized portfolio.

Investment Name	Account Number	Ticker	CUSIP	Liquidity	Unreconciled Balance As of: 1/20/2021	Current Allocation	Target Allocation	Proposed Target Allocation	Trade Amount	Resulting Balances	Resulting Allocation
Cash					\$225,555	1.3%	0.0%	0.0%	\$0	\$225,555	1.3%
Cash	9546002145	CASH		Daily	\$225,555	1.3%	0.0%	0.0%		\$225,555	1.3%
Fixed Income					\$4,907,219	27.9%	30.0%	27.5%	(\$125,000)	\$4,782,219	27.2%
Metropolitan West Total Return Bond Pl	9546002145	MWTSX	592905764	Daily T+1	\$2,745,264	15.6%	17.0%	16.5%	\$125,000	\$2,870,264	16.3%
BlackRock Strategic Income Opportunities K	9546002145	BSIKX	09260B374	Daily T+1	\$826,045	4.7%	5.0%	7.0%	\$390,000	\$1,216,045	6.9%
Eaton Vance Floating Rate Fund Class R6	9546002145	ESBLX	27826A730	Daily T+1	\$661,333	3.8%	4.0%	1.5%	(\$400,000)	\$261,333	1.5%
BrandywineGLOBAL Global Opportunities Bond IS	9546002145	GOBSX	524686318	Daily T+1	\$674,577	3.8%	4.0%	2.5%	(\$240,000)	\$434,577	2.5%
Domestic Equity					\$7.266.018	41.3%	41.0%	35.5%	(\$1.105.000)	\$6.161.018	35.0%
Vanguard Institutional Index Inst	9546002145	VINIX	922040100	Dailv T+1	\$3,813,498	21.7%	22.0%	16.0%	(\$1.040.000)	\$2,773,498	15.8%
T. Rowe Price Equity Income I	9546002145	REIPX	779547405	Daily T+1	\$1,506,761	8.6%	8.5%	6.5%	(\$380,000)	\$1,126,761	6.4%
Harbor Capital Appreciation Retirement	9546002145	HNACX	411512528	, Daily T+1	\$987,359	5.6%	5.5%	4.0%	(\$290,000)	\$697,359	4.0%
Glenmede Small Cap Equity I	9546002145	GTSCX	378690820	Daily T+1	\$958,400	5.4%	5.0%	9.0%	\$605,000	\$1,563,400	8.9%
International Equity					\$4.394.984	25.0%	24.0%	28.0%	\$475.000	\$4.869.984	27.7%
Dodge & Cox International Stock Fund	9546002145	DODFX	256206103	Daily T+1	\$2,133,704	12.1%	12.0%	14.0%	\$300,000	\$2,433,704	13.8%
Vanguard International Growth Admiral	9546002145	VWILX	921910501	Daily T+1	\$2,261,280	12.8%	12.0%	14.0%	\$175,000	\$2,436,280	13.8%
Alternatives - Real Estate					\$812.786	4.6%	5.0%	5.5%	\$145.000	\$957.786	5.4%
DFA Global Real Estate	9546002145	DFGEX	23320G554	Daily T+1	\$812,786	4.6%	5.0%	5.5%	\$145,000	\$957,786	5.4%
Alternatives - Real Estate					\$0	0.0%	0.0%	3.5%	\$610.000	\$610.000	3.5%
Principal Diversified Real Asset R6	9546002145	PDARX	74254V166	Daily T+1	\$0	0.0%	0.0%	3.5%	\$610,000	\$610,000	3.5%
Investment Portfolio Total					\$17,606,563	100.0%	100.0%	100.0%	\$0	\$17,606,563	100.0%

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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 responsibility for inaccurate or the 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.

Signature

Date



South Windsor OPEB

Cash Flow Worksheet

Objective : 1) Reallocate portfolio to introduce a 3.5% allocation to Principal Diversified Real Assets Fund and allocate portfolio according to optimized portfolio.

Investment Name	Account Number	Ticker	CUSIP	Liquidity	Unreconciled Balance As of: 1/20/2021 \$28,483	Current Allocation 0.7%	Target Allocation 0.0%	Proposed Target Allocation 0.0%	Trade Amount \$0	Resulting Balances \$28,483	Resulting Allocation 0.7%
Cash											
Cash	26184200	CASH		Daily	\$28,483	0.7%	0.0%	0.0%		\$28,483	0.7%
Fixed Income					\$1,156,203	27.9%	30.0%	27.5%	(\$25,000)	\$1,131,203	27.3%
Metropolitan West Total Return Bond Pl	26184200	MWTSX	592905764	Daily T+1	\$645,486	15.6%	17.0%	16.5%	\$30,000	\$675 <i>,</i> 486	16.3%
BlackRock Strategic Income Opportunities K	26184200	BSIKX	09260B374	Daily T+1	\$194,377	4.7%	5.0%	7.0%	\$95,000	\$289,377	7.0%
Eaton Vance Floating Rate Fund Class R6	26184200	ESBLX	27826A730	Daily T+1	\$156,966	3.8%	4.0%	1.5%	(\$95,000)	\$61,966	1.5%
BrandywineGLOBAL Global Opportunities Bond IS	26184200	GOBSX	524686318	Daily T+1	\$159,374	3.8%	4.0%	2.5%	(\$55,000)	\$104,374	2.5%
Domestic Equity					\$1,707,529	41.2%	41.0%	35.5%	(\$250,000)	\$1,457,529	35.2%
Vanguard Institutional Index Instl	26184200	VINIX	922040100	Daily T+1	\$886,350	21.4%	22.0%	16.0%	(\$235,000)	\$651,350	15.7%
T. Rowe Price Equity Income I	26184200	REIPX	779547405	Daily T+1	\$358,439	8.6%	8.5%	6.5%	(\$90,000)	\$268,439	6.5%
Harbor Capital Appreciation Retirement	26184200	HNACX	411512528	Daily T+1	\$231,564	5.6%	5.5%	4.0%	(\$65,000)	\$166,564	4.0%
Glenmede Small Cap Equity I	26184200	GTSCX	378690820	Daily T+1	\$231,174	5.6%	5.0%	9.0%	\$140,000	\$371,174	9.0%
International Equity					\$1,059,776	25.6%	24.0%	28.0%	\$95,000	\$1,154,776	27.9%
Dodge & Cox International Stock Fund	26184200	DODFX	256206103	Daily T+1	\$516,433	12.5%	12.0%	14.0%	\$60,000	\$576 <i>,</i> 433	13.9%
Vanguard International Growth Admiral	26184200	VWILX	921910501	Daily T+1	\$543,343	13.1%	12.0%	14.0%	\$35,000	\$578,343	13.9%
Alternatives - Real Estate					\$194,162	4.7%	5.0%	5.5%	\$35,000	\$229,162	5.5%
DFA Global Real Estate	26184200	DFGEX	23320G554	Daily T+1	\$194,162	4.7%	5.0%	5.5%	\$35,000	\$229,162	5.5%
Alternatives - Real Estate					\$0	0.0%	0.0%	3.5%	\$145,000	\$145,000	3.5%
Principal Diversified Real Asset R6	26184200	PDARX	74254V166	Daily T+1	\$0	0.0%	0.0%	3.5%	\$145,000	\$145,000	3.5%
Investment Portfolio Total					\$4,146.153	100.0%	100.0%	100.0%	\$0	\$4,146,153	100.0%

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 ncomplete 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.

Signature

Date

Investment Manager Review

Real Assets

Period Ending December 31, 2020

Strategies Included:

Principal:Dvs RI As;Inst

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

<u>FIRM INFORMATION</u> Firm Name: Principal Portfolio Strategies Location: Des Moines, Iowa

STRATEGY & VEHICLE INFORMATION

Strategy Name: Principal Diversified Real Asset *Strategy Inception:* March, 2010 *Strategy Assets:* \$4.0 billion *Ownership:* Publicly Held *Firm Assets:* \$702 billion

Proposed Vehicle: Mutual Fund *Vehicle Name:* Principal Diversified Real Asset *Vehicle Assets:* \$936 million *Vehicle Inception:* 2010 *Vehicle Fees:* 0.84% (Instl. - PDRDX)

<u>Investment Team:</u>

The Principal Diversified Real Asset Fund is managed by Jessica Bush, Marc Dummer, Kelly Grossman and Ben Rotenberg. The PMs are responsible for providing oversight of the Fund, developing and monitoring the investment guidelines for each underlying portfolio and rebalancing the underlying portfolios.

<u>Investment Philosophy:</u>

The premise of the investment philosophy is that stocks and bonds exhibit low correlations to inflation over both short and long time horizons, and real assets have historically provided excellent inflation protection. The most effective method to manage the impacts of longevity, sequential return, and inflation risks is to maintain an allocation to a diverse portfolio of real assets.

<u>Process:</u>

The investment process utilizes a multi-strategy, multi-manager approach with several investment sleeves. Sleeves include CMBS, floating rate debt, TIPS, global infrastructure, global water, global natural resources, global timber, commodities and global REITs. Each sleeve is managed by a different sub-advisor, each implementing their own security selection process. The Principal Portfolio Strategies team conducts a rigorous sub-advisor screening process and continuously monitors the underlying managers. Qualities the team looks for in sub-advisors include track record, assets under management, investment style, minimum account size and performance. The first part of Principal's management process is selecting the investable strategies consistent with the Fund's objective. The team then formulates capital market forecasts and an efficient portfolio is constructed by optimizing return per unit of risk. A rules-based rebalancing strategy is employed so that if a manager's weight reaches the upper or lower limit, it is rebalanced half way back to target.

Portfolio Construction:

Allocation decisions are implemented primarily through the capital market assumptions constructed by the team. The Fund uses a multi-manager approach to provide a diversified allocation to inflation-sensitive asset class portfolios. Each sleeve is managed to a target tactical, active allocation. Target weights are set in order to achieve inflation sensitivity targets.

<u>Risk Controls:</u>

Portfolio Managers are responsible for monitoring the risk/reward profile of underlying investments and total portfolio risk. The diversified set of inflation sensitive asset classes provides an inherent layer of risk protection.

For the prospectus please go to www.principalfunds.com

Principal Diversified Real Assets

Portfolio Information

Fund Style: Diversified Real Assets Principal DRA AUM: \$4.3 Billion



Fund Investment Policy

The Principal Diversfied Real Asset Portfolio provides diversified exposure to the real assets market. The intent of the Diversified Real Assets Fund is to provide an investment vehicle with the goal of delivering inflation protection with a long term return objective of CPI + 300-500 bps. The product is designed as a multi-manager fund with exposure to inflation sensitive assets and is diversified across asset classes, geography, investment manager and security type. The portfolio construction is intended to manage the effects of both gradual and sudden inflation.

Sub-Advisors								
Real Return								
Floating Rate: Nuveen	Global							
TIPS: Blackrock								
CMBS: Principal Real Estate Investors								
Natural Resources								
Global Nat. Res.: BNY Mellon	Credit S							
Global Nat. Res.: S&P GNR Index								
Global Timber: Pictet	Princip							

Change in Active Weights									
	<u>Q4 2020</u>	<u>Q3 2020</u>	<u>Difference</u>						
TIPS	21.0%	19.0%	2.0%						
Floating Rate Debt	8.0%	15.0%	-7.0%						
CMBS	4.0%	4.0%	0.0%						
Cash	0.0%	0.0%	0.0%						
Commodities	14.0%	11.0%	3.0%						
Global Infrastructure	20.0%	20.0%	0.0%						
Global Water	2.0%	2.0%	0.0%						
Global Natural Resources	17.0%	16.0%	1.0%						
Global Timber	3.0%	3.0%	0.0%						
REITs	<u>10.0%</u>	<u>10.0%</u>	0.0%						
TOTAL	100%	100%							

<u>Infrastructure</u>

Infra: Macquarie

Infra: RARE Infra

Water: S&P Water Index

Commodities

Suisse

Global REITs

bal

ANNUALIZED PERFORMANCE & PEER COMPARISON



Principal:Dvs RI As;Inst

▲ Principal DRA Blended Index

	YTD	1-Year	3-Year	5-Year	7-Year	10-Year
Principal:Dvs RI As;Inst	3.97	3.97	3.27	5.13	2.06	2.81
Principal DRA Blended Index	2.08	2.08	2.83	6.17	2.56	2.37

Note: Alternative share classes may be shown to provide the longest track record. Please refer to the manager pages for share class information. Universe ranking is based on the . Returns greater than one year are annualized.

CALENDAR YEAR PERFORMANCE



Principal:Dvs RI As;Inst

▲ Principal DRA Blended Index

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Principal:Dvs RI As;Inst	0.83	7.65	5.38	2.52	-12.40	5.86	10.17	-7.90	15.01	3.97
Principal DRA Blended Index	-1.33	8.71	-1.24	0.22	-11.74	12.40	10.38	-7.26	14.86	2.08

Universe ranking is based on the . Returns greater than one year are annualized.

THREE-YEAR ROLLING EXCESS RETURNS


STYLE ANALYSIS



Sector

Principal:Dvs RI As;Inst

Sector

□ Natural Resources

Sector

▲ Principal DRA Blended Index

Data as of December 31, 2020 unless otherwide noted.

RETURN VS. RISK



Principal:Dvs RI As;Inst

A Principal DRA Blended Index

	3 Years		5 Years		7 Years		10 Years	
	Return	Std Dev	Return	Std Dev	Return	Std Dev	Return	Std Dev
Principal:Dvs RI As;Inst	3.27	13.36	5.13	10.92	2.06	10.25	2.81	10.06
Principal DRA Blended Index	2.83	12.62	6.17	10.50	2.56	9.96	2.37	9.91

Data greater than one year is annualized.

PERFORMANCE STATISTICS



💻 Beta

MPT STATISTICS

	5 Year						
	Alpha, %	Beta	R-Squared, %	Sharpe Ratio	Tracking Error, %	Batting Average	
Principal:Dvs RI As;Inst	-1.02	1.02	95.32	0.40	2.39	0.48	
Principal DRA Blended Index	0.00	1.00	100.00	0.51	0.00	0.00	

	10 Year						
	Alpha, %	Beta	R-Squared, %	Sharpe Ratio	Tracking Error, %	Batting Average	
Principal:Dvs RI As;Inst	0.48	0.98	93.88	0.26	2.51	0.53	
Principal DRA Blended Index	0.00	1.00	100.00	0.22	0.00	0.00	

MARKET CAPTURE STATISTICS

Up/Down Market Capture Ratio



		5 Years		10 Years		
	Up Mkt Capture	Down Mkt Capture	Annualized Semi	Up Mkt Capture	Down Mkt Capture	Annualized Semi
	Ratio, %	Ratio, %	Stdev to date,%	Ratio, %	Ratio, %	Stdev to date,%
Principal:Dvs RI As;Inst	95.49	103.34	7.99	99.06	95.44	7.30

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^3) - 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.



RETIREMENT PLAN FOR EMPLOYEES OF THE TOWN OF SOUTH WINDSOR

Actuarial Valuation as of July 1, 2020 To Determine Funding for Fiscal Year 2021-22

Prepared by

Michelle L. Boyles, FSA Consulting Actuary

80 Lamberton Road Windsor, CT 06095 USA (860) 687-2110 milliman.com

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July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

Certification

We have performed an actuarial valuation of the Plan as of July 1, 2020 to determine funding for fiscal year 2021-22. This report presents the results of our valuation.

The ultimate cost of a pension plan is the total amount needed to provide benefits for plan members and beneficiaries and to pay the expenses of administering the plan. Pension costs are met by contributions and by investment return on plan assets. The principal purpose of this report is to set forth an actuarial recommendation of the contribution, or range of contributions, which will properly fund the plan, in accordance with applicable government regulations. In addition, this report provides:

- A valuation of plan assets and liabilities to review the year-to-year progress of funding.
- Information needed to meet disclosure requirements.
- Review of plan experience for the previous year to ascertain whether the assumptions and methods employed for valuation purposes are reflective of actual events and remain appropriate for prospective application.
- Assessment of the relative funded position of the plan, i.e., through a comparison of plan assets and projected plan liabilities.
- Comments on any other matters which may be of assistance in the funding and operation of the plan.

This report may not be used for purposes other than those listed above without Milliman's prior written consent. If this report is distributed to other parties, it must be copied in its entirety, including this certification section.

Milliman's work is prepared solely for the internal business use of the Town of South Windsor ("Town"). To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions: (a) the Town may provide a copy of Milliman's work, in its entirety, to the Town's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the Town; and (b) the Town may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law. No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

In preparing this report, we relied on employee census data and financial information as of the valuation date, furnished by the Town. We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have found them to be reasonably consistent and comparable with data used for other purposes. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete and our calculations may need to be revised. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

Certification

Figures for periods prior to July 1, 2015 have been obtained from the valuation reports produced by Southeast Retirement Plan Consulting.

The calculations reported herein have been made on a basis consistent with our understanding of ERISA and the related sections of the tax code. Additional determinations may be needed for purposes other than meeting funding requirements, such as judging benefit security at plan termination or meeting employer accounting requirements. On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate and all costs and liabilities were determined in conformance with generally accepted actuarial principles and practices.

The valuation results were developed using models intended for valuations that use standard actuarial techniques. In addition to these models, Milliman has developed certain models to develop the expected long term rate of return on assets used in this analysis. We have reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice (ASOP). The models including all input, calculations, and output may not be appropriate for any other purpose.

We further certify that, in our opinion, each actuarial assumption, method and technique used is reasonable taking into account the experience of the Plan and reasonable expectations. Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuarial assignment, we did not perform an analysis of the potential range of such future measurement.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Jucket J. Boyles

Michelle L. Boyles, FSA Consulting Actuary

July 1, 2020 Actuarial Valuation Retirement Plan for Employees of the Town of South Windsor

Section I - Executive Summary Changes Since the Prior Valuation

Plan Changes

None.

Changes in Actuarial Methods and Assumptions

We lowered the interest rate assumption from 6.75% to 6.50%. This change increased the Accrued Liability by about \$1,282,000 and increased the Actuarially Determined Contribution by approximately \$121,000.

We changed the Mortality Table from the RP-2000 Combined Healthy Mortality Table with generational projection per Scale BB to the Pub-2010 Mortality Table with generational projection per the MP ultimate scale, with employee rates before benefit commencement and healthy or disabled annuitant rates after benefit commencement. We have assumed the PubS-2010 tables for Police and PubG-2010 tables for all other groups.

These mortality changes increased the Accrued Liability by about \$616,000 and the Actuarially Determined Contribution by \$63,000, for a total Accrued Liability increase of \$1,898,000 and a total Actuarially Determined Contribution increase of \$184,000.

Other Significant Changes

None.

Section I - Executive Summary Assets

There are two different measures of the plan's assets that are used throughout this report. The Market Value is a snapshot of the plan's investments as of the valuation date. The Actuarial Value is a smoothed asset value designed to temper the volatile fluctuations in the market by recognizing investment gains or losses non-asymptotically over five years.

	Market	Actuarial
Value as of July 1, 2019	\$30,287,778	\$30,824,232
Town and Member Contributions	2,571,248	2,571,248
Investment Income	1,230,917	1,559,931
Benefit Payments and Administrative Expenses	(2,331,510)	(2,331,510)
Value as of July 1, 2020	31,758,433	32,623,901

For fiscal year 2019-20, the plan's assets earned 4.05% on a Market Value basis and 5.04% on an Actuarial Value basis. The actuarial assumption for this period was 6.75%; the result is an asset loss of about \$0.8 million on a Market Value basis and a loss of about \$0.5 million on an Actuarial Value basis. Historical rates of return are shown in the graph below.



Please note that the Actuarial Value currently exceeds the Market Value by \$0.9 million. This figure represents investment losses that will be gradually recognized in future years. This process will exert upward pressure on the Town's contribution, unless there are offsetting market gains.

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

Section I - Executive Summary Assets (continued)

The graph below shows how this year's asset values compare to where the plan's assets have been over the past several years and how they are projected to change over the next 20 years. For purposes of this projection, we have assumed that the Town always contributes the Actuarially Determined Contribution and the investments always earn the assumed interest rate each year.



In 2019-20, the plan paid out \$2.3 million in benefits to members. Over the next 20 years, the plan is projected to pay out a total of \$74 million in benefits to members.



July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

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Section I - Executive Summary Membership

There are three basic categories of plan members included in the valuation: (1) members who are receiving monthly pension benefits, (2) former employees who have a vested right to benefits but have not yet started collecting, and (3) active employees who have met the eligibility requirements for membership.



Members in Pay Status on July 1, 2020

Service Retirees	77	Average Age	71.0
Disabled Retirees	0	Total Annual Benefit	\$2,217,359
Beneficiaries	12	Average Annual Benefit	24,914
Total	89		



The members in pay status fall across a wide distribution of ages:

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

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Section I - Executive Summary Membership (continued)

Terminated Vested Members on July 1, 2020

Count	17
Average Age	56.4
Total Annual Benefit	\$106,418
Average Annual Benefit	6,260

Active Members on July 1, 2020

Count	68
Average Age	53.7
Average Service	21.0
Payroll	\$5,089,679
Average Payroll	74,848

The table below illustrates the age and years of service of the active membership:

				Years o	f Service			
Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
< 25								0
25-29								0
30-34								0
35-39			2	1				3
40-44			1	4	2			7
45-49	1		2	9	2			14
50-54	1		1	4	3	2	1	12
55-59		1	2	3	1	2		9
60-64			4	3	5	1	2	15
65+	1	1	2	2			2	8
Total	3	2	14	26	13	5	5	68

July 1, 2020 Actuarial Valuation Retirement Plan for Employees of the Town of South Windsor

Section I - Executive Summary Accrued Liability

The Accrued Liability as of July 1, 2020 consists of the following pieces:



The Accrued Liability for active members can be broken down further by the different types of benefits provided by the plan:



July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

Section I - Executive Summary Funded Status

The Accrued Liability grows over time as active members earn additional benefits, and goes down over time as members receive benefits; it may also change when there are changes to the plan provisions or changes in the actuarial assumptions. The Unfunded Accrued Liability is the dollar difference between the Accrued Liability and the Actuarial Value of Assets; the Funded Ratio is the ratio of the two.









July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

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Section I - Executive Summary Actuarially Determined Contribution

The Actuarially Determined Contribution consists of three pieces: a Normal Cost payment to fund the benefits earned each year, a Past Service Cost to gradually reduce any unfunded or surplus liability, and Interest to reflect the timing of the contribution relative to the valuation date.

The Actuarially Determined Contribution for fiscal year 2021-22 is shown graphically below, along with the comparable figures for the preceding four fiscal years. Note that the Normal Cost is relatively consistent from year to year, whereas the Past Service Cost tends to be more volatile since it reflects the impact of asset performance.



Section I - Executive Summary Long-Range Forecast

If the Town pays the Actuarially Determined Contribution each year, the investments earn exactly the assumed interest rate each year, and there are no changes in the plan provisions or in the actuarial methods and assumptions, then we project the following changes in the plan's funded status and the long-range contribution levels:



To the extent that there are future investment or liability gains or losses, changes in the actuarial assumptions or methods, or plan changes, the actual valuation results will differ from these forecasts. Please see Section III C for more details of the long range forecast.

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

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Section I - Executive Summary Long-Range Forecast (continued)

Pension benefits are paid for through a combination of contributions from the Town and from employees, and from investment income. If the Town pays less than the Actuarially Determined Contribution each year, or if the investments persistently earn less than the assumed interest rate, then the plan's funded status would suffer, and to compensate, the Town's contribution levels would be pushed higher. The risks of underfunding and underearning are illustrated in the hypothetical scenarios below:



The scenarios illustrated above are based on deterministic projections that assume emerging plan experience always exactly matches the actuarial assumptions; in particular that actual asset returns will be constant in every year of the projection period. Variation in asset returns, contribution amounts, and many other factors may have a significant impact on the long-term financial health of the plan, the liquidity constraints on plan assets, and the Town's future contribution levels. Stochastic projections could be prepared that would enable the Town to understand the potential range of future results based on the expected variability in asset returns and other factors. Such analysis was beyond the scope of this engagement.

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

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Section I - Executive Summary Summary of Principal Results

Membership as of	July 1, 2019	July 1, 2020
Active Members	70	68
Terminated Members	19	17
Members in Pay Status	<u>86</u>	<u>89</u>
Total Count	175	174
Payroll	\$5,078,360	\$5,089,679
Assets and Liabilities as of	July 1, 2019	July 1, 2020
Market Value of Assets	\$30,287,778	\$31,758,433
Actuarial Value of Assets	30,824,232	32,623,901
Accrued Liability for Active Members	18,810,553	21,051,937
Accrued Liability for Terminated Members	1,234,918	1,284,965
Accrued Liability for Members in Pay Status	<u>24,241,771</u>	<u>25,013,336</u>
Total Accrued Liability	44,287,242	47,350,238
Unfunded Accrued Liability	13,463,010	14,726,337
Funded Ratio	69.6%	68.9%
Actuarially Determined Contribution for Fiscal Year	2020-21	2021-22
Normal Cost	\$442,764	\$505,228
Past Service Cost	1,057,958	1,153,186
Interest	<u>101,299</u>	<u>107,797</u>
Actuarially Determined Contribution	1,602,021	1,766,211

July 1, 2020 Actuarial Valuation Retirement Plan for Employees of the Town of South Windsor

Section II - Plan Assets A. Summary of Fund Transactions

Market Value as of July 1, 2019	\$30,287,778
Town Contributions	2,133,752
Member Contributions	437,496
Net Investment Income	1,230,917
Benefit Payments	(2,267,474)
Administrative Expenses	(64,036)
Market Value as of June 30, 2020	31,758,433
Expected Return on Market Value of Assets	2,051,528
Market Value (Gain)/Loss	820,611
Approximate Rate of Return *	4.05%

* The rate shown here is not the dollar or time weighted investment yield rate which measures investment performance. It is an approximate net return assuming all activity occurred on average midway through the fiscal year.

Target Asset Allocation as of June 30, 2020

Equity

- Fixed Income
- Other



July 1, 2020 Actuarial Valuation Retirement Plan for Employees of the Town of South Windsor

Section II - Plan Assets B. Development of Actuarial Value of Assets

In order to minimize the impact of market fluctuations on the contribution level, we use an Actuarial Value of Assets that recognizes gains and losses in equal installments ('non-asymptotically') over a five year period. The Actuarial Value of Assets as of July 1, 2020 is determined below.

1.	Expected Market Value of Assets:	
	a. Market Value of Assets as of July 1, 2019	\$30,287,778
	b. Town and Member Contributions	2,571,248
	c. Benefit Payments and Administrative Expenses	(2,331,510)
	d. Expected Earnings Based on 6.75% Interest	<u>2,051,528</u>
	e. Expected Market Value of Assets as of July 1, 2020	32,579,044
2.	Actual Market Value of Assets as of July 1, 2020	31,758,433
3.	Market Value (Gain)/Loss: (1e) - (2)	820,611

4. Delayed Recognition of Market (Gains)/Losses

	Plan Year End 06/30/2020 06/30/2019 06/30/2018 06/30/2017	(Gain)/Loss \$820,611 1,048,344 (479,165) (1,141,807)	Percent Not Recognized 80% 60% 40% 20%	Amount Not Recognized \$656,489 629,006 (191,666) (228,361)	865,468
5.	Preliminary Actuaria	l Value of Assets as of	July 1, 2020: (2) + (4)	32,623,901
6.	Corridor Limit:	80% of Market Value 120% of Market Value			25,406,746 38,110,120
7.	Final Actuarial Value	e of Assets as of July 1,	, 2020: (5) constraine	d by (6)	32,623,901
8.	Return on Actuarial	Value of Assets:			1,559,931
9.	Approximate Rate o	f Return on Actuarial Va	alue of Assets		5.04%
10.	Actuarial Value (Gai	n)/Loss			529,262

July 1, 2020 Actuarial Valuation

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Retirement Plan for Employees of the Town of South Windsor

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Section III - Development of Contribution A. Past Service Cost

In determining the Past Service Cost, the Unfunded Accrued Liability is amortized as a level dollar amount. Beginning on July 1, 2015, the amortization period is 29 years (closed).

		July 1, 2019	July 1, 2020
1.	Accrued Liability		
	Active Members	\$18,810,553	\$21,051,937
	Terminated Members	1,234,918	1,284,965
	Service Retirees	22,970,456	23,718,542
	Disabled Retirees	0	0
	Beneficiaries	<u>1,271,315</u>	<u>1,294,794</u>
	Total Accrued Liability	44,287,242	47,350,238
2.	Actuarial Value of Assets	30,824,232	32,623,901
	(see Section IIB)		
3.	Unfunded Accrued Liability: (1) - (2)	13,463,010	14,726,337
4.	Funded Ratio: (2) / (1)	69.6%	68.9%
5.	Amortization Period	25	24
6.	Amortization Growth Rate	0.00%	0.00%
7.	Past Service Cost: (3) amortized over (5)	1,057,958	1,153,186

		2020-21	2021-22
1.	Total Normal Cost	\$674,483	\$731,520
2.	Expected Member Contributions	289,619	292,292
3.	Expected Administrative Expenses	57,900	66,000
4.	Net Normal Cost: (1) - (2) + (3)	442,764	505,228
5.	Past Service Cost (see Section IIIA)	1,057,958	1,153,186
6.	Interest on (4) + (5) to the start of the fiscal year	101,299	107,797
7.	Actuarially Determined Contribution: (4) + (5) + (6)	1,602,021	1,766,211

Section III - Development of Contribution B. Actuarially Determined Contribution

Section III - Development of Contribution C. Long Range Forecast

This forecast is based on the results of the July 1, 2020 actuarial valuation and assumes that the Town will pay the Actuarially Determined Contribution each year, the assets will return the assumed interest rate on a market value basis each year, and there are no future changes in the actuarial methods or assumptions or in the plan provisions. For purposes of this forecast the amortization period declines to 1 year to illustrate the progress of the plan towards becoming fully funded; in actual practice the amortization period will not be less than 10 years in order to shield the Town from contribution volatility. Actual results at each point in time will yield different values, reflecting the actual experience of the plan membership and assets.

-	Va	alues as of the \	/aluation Date			Cash Flows Projected to the Following Fiscal Y			scal Year
-		Actuarial	Unfunded						
Valuation	Accrued	Value of	Accrued	Funded	Fiscal	Town	Member	Benefit	Net
Date	Liability	Assets	Liability	Ratio	Year	Contributions	Contributions	Payments	Cash Flows
07/01/2020	\$47,350,238	\$32,623,901	\$14,726,337	68.9%	2021-22	\$1,766,211	\$261,223	(\$2,703,223)	(\$675,789)
07/01/2021	48,427,000	33,755,000	14,672,000	69.7%	2022-23	1,711,000	250,000	(2,871,000)	(910,000)
07/01/2022	49,447,000	34,851,000	14,596,000	70.5%	2023-24	1,702,000	232,000	(2,973,000)	(1,039,000)
07/01/2023	50,318,000	35,697,000	14,621,000	70.9%	2024-25	1,681,000	221,000	(3,130,000)	(1,228,000)
07/01/2024	51,066,000	36,696,000	14,370,000	71.9%	2025-26	1,666,000	210,000	(3,220,000)	(1,344,000)
07/01/2025	51,663,000	37,738,000	13,925,000	73.0%	2026-27	1,633,000	201,000	(3,337,000)	(1,503,000)
07/01/2026	52,164,000	38,724,000	13,440,000	74.2%	2027-28	1,612,000	190,000	(3,575,000)	(1,773,000)
07/01/2027	52,553,000	39,608,000	12,945,000	75.4%	2028-29	1,570,000	166,000	(3,598,000)	(1,862,000)
07/01/2028	52,673,000	40,269,000	12,404,000	76.5%	2029-30	1,533,000	163,000	(3,693,000)	(1,997,000)
07/01/2029	52,723,000	40,878,000	11,845,000	77.5%	2030-31	1,520,000	154,000	(3,820,000)	(2,146,000)
07/01/2030	52,668,000	41,386,000	11,282,000	78.6%	2031-32	1,500,000	138,000	(3,867,000)	(2,229,000)
07/01/2031	52,456,000	41,770,000	10,686,000	79.6%	2032-33	1,476,000	129,000	(4,057,000)	(2,452,000)
07/01/2032	52,145,000	42,091,000	10,054,000	80.7%	2033-34	1,460,000	104,000	(4,109,000)	(2,545,000)
07/01/2033	51,599,000	42,199,000	9,400,000	81.8%	2034-35	1,420,000	95,000	(4,205,000)	(2,690,000)
07/01/2034	50,904,000	42,216,000	8,688,000	82.9%	2035-36	1,401,000	79,000	(4,325,000)	(2,845,000)
07/01/2035	50,046,000	42,081,000	7,965,000	84.1%	2036-37	1,375,000	59,000	(4,352,000)	(2,918,000)
07/01/2036	48,975,000	41,776,000	7,199,000	85.3%	2037-38	1,341,000	48,000	(4,317,000)	(2,928,000)
07/01/2037	47,762,000	41,370,000	6,392,000	86.6%	2038-39	1,319,000	43,000	(4,381,000)	(3,019,000)
07/01/2038	46,484,000	40,925,000	5,559,000	88.0%	2039-40	1,300,000	28,000	(4,346,000)	(3,018,000)
07/01/2039	45,047,000	40,354,000	4,693,000	89.6%	2040-41	1,273,000	21,000	(4,319,000)	(3,025,000)

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

This work product was prepared solely for the Town for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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	Actuarial		Unfunded	
Valuation	Value of	Accrued	Accrued	Funded
Date	Assets	Liability	Liability	Ratio
				=0.00/
January 1, 2011	\$15,778,240	\$26,743,578	\$10,965,338	59.0%
January 1, 2012	17,001,457	29,038,451	12,036,994	58.5%
January 1, 2013	18,502,417	31,008,924	12,506,507	59.7%
January 1, 2014	21,317,803	34,458,002	13,140,199	61.9%
July 1, 2015	23,516,596	40,746,714	17,230,118	57.7%
July 1, 2016	25,013,200	43,482,335	18,469,135	57.5%
July 1, 2017	26,896,653	41,775,377	14,878,724	64.4%
July 1, 2018	28,631,450	43,106,650	14,475,200	66.4%
July 1, 2019	30,824,232	44,287,242	13,463,010	69.6%
July 1, 2020	32,623,901	47,350,238	14,726,337	68.9%

Section III - Development of Contribution D. History of Funded Status

Fiscal	Actuarially Determined	Actual Town		Actual Contribution as a Percent of
Year	Contribution	Contribution	Payroll	Payroll
2012-13	\$1,697,994	\$1,697,994	\$5,352,711	31.7%
2013-14	1,686,734	1,867,793	4,749,846	39.3%
2014-15	1,727,470	1,727,470	4,716,701	36.6%
2015-16	1,727,470	1,727,470	4,716,701	36.6%
2016-17	1,820,733	1,820,733	4,540,844	40.1%
2017-18	1,956,477	1,956,477	4,177,838	46.8%
2018-19	1,714,348	2,856,477	5,634,675	50.7%
2019-20	1,733,752	2,133,752	5,548,107	38.5%
2020-21	1,602,021	TBD	5,078,360	TBD
2021-22	1,766,211	TBD	5,089,679	TBD

Section III - Development of Contribution E. History of Town Contributions

Section IV - Membership Data A. Reconciliation of Membership from Prior Valuation

Details of the changes in the Plan membership since the last valuation are shown below. Additional details on the Plan membership are provided in the remainder of Section IV.

	Active Members	Terminated Vested Members	Service Retirees	Disabled Retirees	Beneficiaries	Total
Count July 1, 2019	70	19	75	0	11	175
Terminated						
- no benefits due	-	-	-	-	-	0
- paid refund	-	-	-	-	-	0
- vested benefits due	-	-	-	-	-	0
Retired	(2)	(2)	4	-	-	0
Died						
- with beneficiary	-	-	(1)	-	1	0
- no beneficiary	-	-	(1)	-	-	(1)
Benefits expired	-	-	-	-	-	0
New member	-	-	-	-	-	0
Rehired	-	-	-	-	-	0
New Alternate Payee	-	-	-	-	-	0
Correction	-	-	-	-	-	0
Count July 1, 2020	68	17	77	0	12	174

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

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	As of	As of
	July 1, 2019	July 1, 2020
Number of Active Members	70	68
Average Age	53.1	53.7
Average Service	19.8	21.0
Total Payroll	\$5,078,360	\$5,089,679
Average Payroll	72,548	74,848

Section IV - Membership Data B. Statistics of Active Membership

	As of	As of
	July 1, 2019	July 1, 2020
Terminated Vested Members		
Number	19	17
Total Annual Benefit	\$124,964	\$106,418
Average Annual Benefit	6,577	6,260
Average Age	56.3	56.4
Service Retirees		
Number	75	77
Total Annual Benefit	\$2,054,532	\$2,069,651
Average Annual Benefit	27,394	26,879
Average Age	69.4	69.9
Disabled Retirees		
Number	0	0
Total Annual Benefit	\$0	\$0
Average Annual Benefit	0	0
Average Age	0.0	0.0
Beneficiaries		
Number	11	12
Total Annual Benefit	\$145,557	\$147,708
Average Annual Benefit	13,232	12,309
Average Age	78.6	77.8

Section IV - Membership Data C. Statistics of Inactive Membership

July 1, 2020 Actuarial Valuation Retirement Plan for Employees of the Town of South Windsor

Section IV - Membership Data D. Distribution of Inactive Members as of July 1, 2020

			Monthly
	Age	Number	Benefits
Terminated Vested Members	< 30	0	\$0
	30 - 39	0	0
	40 - 49	4	710
	50 - 59	5	2,915
	60 - 64	4	3,171
	65 +	<u>4</u>	<u>2,073</u>
	Total	17	8,868
Service Retirees	< 50	0	\$0
	50 - 59	11	38,596
	60 - 69	26	65.062
	70 - 79	30	58,639
	80 - 89	8	9.501
	90 +	2	673
	Total	77	172,471
Disabled Retirees	< 50	0	\$0
	50 - 59	0	¢\$ 0
	60 - 69	0	0
	70 - 79	0	0
	80 - 89	0	0
	90 +	0	0
	Total	0	<u>0</u>
Base Calada	. 50	0	^
Beneficiaries	< 50	0	\$0
	50 - 59	0	0
	60 - 69	4	4,036
	70 - 79	1	2,290
	80 - 89	5	5,457
	90 +	<u>2</u>	<u>527</u>
	Total	12	12,310

July 1, 2020 Actuarial Valuation Retirement Plan for Employees of the Town of South Windsor

Section V - Analysis of Risk A. Introduction

The results of this actuarial valuation are based on one set of reasonable assumptions. However, it is almost certain that future experience will not exactly match these assumptions. As an example, the plan's investments may perform better or worse than assumed in any single year and over any longer time horizon. It is therefore important to consider the potential impacts of these likely differences when making decisions that may affect the future financial health of the plan, or of the plan's members.

In addition, as plans mature they accumulate larger pools of assets and liabilities. The increase in size in turn increases the potential magnitude of adverse experience. As an example, the dollar impact of a 10% investment loss on a plan with \$1 billion in assets and liabilities is much greater than the dollar impact for a plan with \$1 million in assets and liabilities. Since pension plans make long-term promises and rely on long-term funding, it is important to consider how mature the plan is today, and how mature it may become in the future.

Actuarial Standard of Practice No. 51 (ASOP 51) directs actuaries to provide pension plan sponsors with information concerning the risks associated with the plan:

- Identify risks that may be significant to the plan.
- Assess the risks identified as significant to the plan. The assessment does not need to include numerical calculations.
- Disclose plan maturity measures and historical information that are significant to understanding the plan's risks.

This section of the report uses the framework of ASOP 51 to communicate important information about significant risks to the plan, the plan's maturity, and relevant historical plan data.

Please see Section III C for more information on the basis for the projected results shown on the following pages.

Section V - Analysis of Risk B. Risk Identification and Assessment

Investment Risk

Definition: This is the potential that investment returns will be different than expected.

Identification: To the extent that actual investment returns differ from the assumed investment return, the plan's future assets, Actuarially Determined Contributions, and funded status may differ significantly from those presented in this valuation. The consequences of persistent underperformance on future Actuarially Determined Contribution levels are illustrated below:



Contribution Risk

Definition: This is the potential that actual future contributions will be less than the Actuarially Determined Contribution.

Identification: Over the past 8 years, actual contributions have been 112.3% of the Actuarially Determined Contribution in total. The consequences of persistent underfunding on future Actuarially Determined Contribution levels are illustrated below:



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Retirement Plan for Employees of the Town of South Windsor

Section V - Analysis of Risk B. Risk Identification and Assessment

Liquidity Risk

Definition: This is the potential that assets must be liquidated at a loss earlier than planned in order to pay for the plan's benefits and operating costs. This risk is heightened for plans with negative cash flows, in which contributions are not sufficient to cover benefit payments plus expenses.

Identification: In 2019-20, the plan had positive cash flow, with town and member contributions to the plan of \$2,571,248 compared to \$2,331,510 of benefit payments and administrative expenses paid out of the plan. We suggest that you consult with your investment advisors with respect to the liquidity characteristics of the plan's investment holdings.

Maturity Risk

Definition: This is the potential for total plan liabilities to become more heavily weighted toward inactive liabilities over time, and for plan assets and/or liabilities to become larger relative to the active member liability.

Identification: The plan is subject to maturity risk because as plan assets and liabilities continue to grow, the dollar impact of any gains or losses on the assets or liabilities also becomes larger.

Assessment: As of July 1, 2020, the plan's Asset Voliatility Ratio (the ratio of the market value of plan assets to payroll) is 6.2. According to Milliman's 2018 Public Pension Funding Study, the 100 largest US public pension plans have the following range of Asset Volatility Ratios:



Inflation Risk

Definition: This is the potential for a pension to lose purchasing power over time due to inflation.

Identification: The members of pension plans without fully inflation-indexed benefits are subject to the risk that their purchasing power will be reduced over time due to inflation.

Assessment: This plan provides for some postretirement benefit increases, but the increases are not directly tied to each year's rate of actual inflation; this leaves members bearing some inflation risk. However, not all members are eligible for these increases.

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

Section V - Analysis of Risk B. Risk Identification and Assessment

Insolvency Risk

Definition: This is the potential that a plan will become insolvent; that is, assets will be fully depleted.

Identification: If a plan becomes insolvent, contractually required benefits must be paid from the plan sponsor's other remaining assets.

Assessment: Under the GASB 68 depletion date methodology, the plan is not projected to become insolvent. Please see the GASB 68 report for more details on the underlying analysis.

Demographic Risks

Definition: This is the potential that mortality, turnover, retirement, or other demographic experience will be different than expected.

Identification: The pension liabilities reported herein have been calculated by assuming that members will follow patterns of demographic experience as described in Appendix B. If actual demographic experience or future demographic assumptions are different from what is assumed to occur in this valuation, future pension liabilities, Actuarially Determined Contributions, and funded status may differ significantly from those presented in this valuation. Formal Experience Studies performed on a regular basis are helpful in ensuring that the demographic assumptions reflect emerging plan experience.

Retirement Risk

Definition: This is the potential for members to retire and receive subsidized benefits that are more valuable than expected.

Identification: This plan has valuable early retirement benefits. If members retire at earlier ages than are anticipated by the actuarial assumptions, this will put upward pressure on subsequent Actuarially Determined Contributions.

Section V - Analysis of Risk C. Maturity Measures

The metrics presented below are different ways of understanding the plan's maturity level, both in the past and as it is expected to change in the coming years.

Asset Volatility Ratio: Market Value of Assets compared to Payroll



Accrued Liability for members in pay status compared to total Accrued Liability



Benefit Payments compared to Market Value of Assets



Net Cash Flows compared to Market Value of Assets

Net Cash Flows = Contributions - Benefit Payments and Administrative Expenses



July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

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Appendix A - Actuarial Funding Method

The actuarial funding method used in the valuation of this Plan is known as the Entry Age Normal Method. The Actuarially Determined Contribution consists of three pieces: Normal Cost plus a Past Service Cost payment to gradually eliminate the Unfunded Accrued Liability plus Interest to reflect the timing of the contribution relative to the valuation date.

The Normal Cost is determined by calculating the present value of future benefits for present active Members that will become payable as the result of death, disability, retirement or termination. This cost is then spread as a level percentage of earnings from entry age to termination as an Active Member. If Normal Costs had been paid at this level for all prior years, a fund would have accumulated. Because this fund represents the portion of benefits that would have been funded to date, it is termed the Accrued Liability. In fact, it is calculated by adding the present value of benefits for Retired Members and Terminated Vested Members to the present value of benefits for Active Members and subtracting the present value of future Normal Cost contributions.

The funding cost of the Plan is derived by making certain specific assumptions as to rates of interest, mortality, turnover, etc. which are assumed to hold for many years into the future. Since actual experience may differ somewhat from the assumptions, the costs determined by the valuation must be regarded as estimates of the true costs of the Plan.

The Unfunded Accrued Liability is the excess of the Accrued Liability over the assets which have been accumulated for the plan. This Unfunded Accrued Liability is amortized as a level dollar amount. Beginning on July 1, 2015, the amortization period is 29 years (closed).

The Actuarial Value of Assets is determined by recognizing market gains and losses non-asymptotically over a five year period. so long as the resulting value is within +/- 20% of the Market Value.

The long-range forecasts included in this report have been developed by assuming that members will terminate, retire, become disabled, and die according to the actuarial assumptions with respect to these causes of decrement, and that pay increases, cost of living adjustments, and so forth will likewise occur according to the actuarial assumptions.

Appendix B - Actuarial Assumptions

Each of the assumptions used in this valuation was set based on industry standard published tables and data, the particular characteristics of the plan, relevant information from the plan sponsor or other sources about future expectations, and our professional judgment regarding future plan experience. We believe the assumptions are reasonable for the contingencies they are measuring, and are not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

Interest	6.50% (6.75% prior)
Inflation	2.70%
Salary Scale	3.00%
Amortization Growth Rate	0.00%
Mortality	Current Police: PubS-2010 Mortality Table with generational projection per the MP ultimate scale, with employee rates before benefit commencement and healthy or disabled annuitant rates after benefit commencement. This assumption includes a margin for improvements in longevity beyond the valuation date.
	Current All Others: PubG-2010 Mortality Table with generational projection per the MP ultimate scale, with employee rates before benefit commencement and healthy or disabled annuitant rates after benefit commencement. This assumption includes a margin for improvements in longevity beyond the valuation date.
	Prior: RP-2000 Combined Healthy Mortality Table with generational projection per Scale BB.

Turnover	Age	Males	Females
	25	7.72%	7.72%
	30	7.22%	7.22%
	35	6.28%	6.28%
	40	5.15%	5.15%
	45	3.98%	3.98%
	50	2.56%	2.56%
	55	0.94%	0.94%
	60	0.09%	0.09%

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

Appendix	В-	Actuarial	Assumptions
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Rate of Retirement	If eligible for Normal Retirement, based on the following table:				
	Age	Group 1	Group 2	Group 3	
	< 60	2%	2%	2%	
	60	75%	2%	2%	
	61	20%	2%	2%	
	62	50%	75%	20%	
	63-64	20%	20%	10%	
	65	50%	50%	75%	
	66-69	40%	40%	40%	
	70	100%	100%	100%	

Group 1 Union Employees other than Library (Police, Public Works, Pollution Control, and Emergency Telecommunicators)Group 2 Town Hall and Management

Group 3 Library

Rate of Disability	Age	Males	Females	
	25	0.06%	0.06%	
	30	0.06%	0.06%	
	35	0.09%	0.09%	
	40	0.18%	0.18%	
	45	0.31%	0.31%	
	50	0.49%	0.49%	
	55	0.80%	0.80%	
	60	1.20%	1.20%	
Marital Status	80% of merr than husban	ibers are assu ds.	imed to be marrie	d with wives 1 year younger
Cost of Living Adjustment	Police: 2% e	very 3 years; /	All Others: none	
Expenses	Administrativ	/e expenses p st \$100.	aid in prior year in	creased by 3% and rounded

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Retirement Plan for Employees of the Town of South Windsor

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Appendix C - Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan. It is not intended to be, nor should it be interpreted as a complete statement of all plan provisions. All eligibility requirements and benefit amounts shall be determined in strict accordance with the plan document itself. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

Eligibility	Full-time Town employees who have attained age 21 and completed one year of Service. Effective July 1, 2013, no new hires are eligible to participate in the defined benefit plan.
Credited Service	Whole years and completed months of service during which the employee made required contributions.
Final Average Earnings	<u>Pollution Control and Library</u> Average of the member's basic earnings for the 60 months prior to retirement, termination, disability, or death.
	<u>All others</u> Average of the member's basic earnings for the 36 months prior to retirement, termination, disability, or death.
Employee Contributions	Police - 7.75% of basic earnings.
	Emergency Telecommunicators - 6.00% of basic earnings.
	All others - 4.50% of basic earnings.
Credited Interest	5% per annum.
Normal Retirement Date	Emergency Telecommunicators - The first day of the month coinciding with or next following the earliest of the Participant's 50th birthday and 10 years of service, 25 years of service, or the Participant's 60th birthday.
	Police - The first day of the month coinciding with or next following the earlier of the Participant's 50th birthday or 25 years of service. For Participants who terminated with a vested benefit prior to July 1, 2001, the normal retirement date is age 58.
	Public Works/Pollution Control - The first day of the month coinciding with or next following the Participant's 60th birthday.
	All others - The first day of the month coinciding with or next following the Participant's 62nd birthday.

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Appendix C - Summary of Plan Provisions

Normal Retirement Benefit	Emergency Telecommunicators 2.00% (2.25% effective July 1, 2017) of Final Average Earnings multiplied by the first 20 years of Credited Service plus 2.50% of Final Average Earnings for up to the next 10 years of Credited Service, subject to a maximum of 65% (70% effective July 1, 2017) of Final Average Earnings.
	<u>Library/Town Hall</u> 2.00% of Final Average Earnings multiplied by years of Credited Service, subject to a maximum of 50% of Final Average Earnings.
	<u>Management/Police</u> 2.50% of Final Average Earnings multiplied by years of Credited Service, subject to a maximum of 75% of Final Average Earnings.
	<u>Pollution Control</u> 2.00% of Final Average Earnings multiplied by years of Credited Service, subject to a maximum of 70% of Final Average Earnings.
	<u>Public Works</u> 2.25% of Final Average Earnings multiplied by the first 20 years of Credited Service plus 2.50% of Final Average Earnings for up to the next 10 years of Credited Service, subject to a maximum of 70% of Final Average Earnings.
Early Retirement Date	The first day of the month within 10 years of Normal Retirement Date.
Early Retirement Benefit	Benefit is based on Credited Service and Final Average Earnings to actual retirement date reduced by an early retirement reduction for the number of months the early retirement date precedes the normal retirement date as defined in the plan.
Deferred Retirement Date	Members may continue to work beyond Normal Retirement Date.
Deferred Retirement Benefit	Benefit is based on Credited Service and Final Average Earnings to actual retirement date.
Vesting Percentage	<u>Police</u> 100% vested after ten years of continuous service. Participants eligible for early retirement are 100% vested. Years of continuous service during which the employee elected not to make required employee contributions are excluded.
	<u>All others</u> 100% vested after five years of continuous service. Participants eligible for early retirement are 100% vested. Years of continuous service during which the employee elected not to make required employee contributions are excluded.

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

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Appendix C - Summary of Plan Provisions

Termination Benefit	Benefit accrued to date of termination with payment commencing on Normal Retirement Date.
Disability Benefit Eligibility	Completion of 10 years of continuous service and certified by the Social Security Administration or other applicable state agency to be permanently and totally disabled.
Disability Benefit	50% of benefit accrued to disability retirement date.
Death Benefit Eligibility	3 years of service and married for at least one year, and either (a) is credited with service on or after July 1, 2002 in a job classification that is not subject to an applicable collective bargaining agreement and is at least age 40, or (b) is at least age 50.
Death Benefit	50% of the participant's accrued benefit reduced 0.5% for each year the spouse is more than 5 years younger than the participant but not less than 40%. The minimum monthly benefit is \$10.
Death / Termination Refund	Refund of Employee Contributions with interest to date of termination or death, if not eligible for Spouse benefit.
Normal Form	Modified Cash Refund.

Appendix D - Glossary

Actuarial Cost Method - This is a procedure for determining the Actuarial Present Value of Benefits and allocating it to time periods to produce the Actuarial Accrued Liability and the Normal Cost.

Accrued Liability - This is the portion of the Actuarial Present Value of Benefits attributable to periods prior to the valuation date by the Actuarial Cost Method (i.e., that portion not provided by future Normal Costs).

Actuarial Assumptions - With any valuation of future benefits, assumptions of anticipated future events are required. If actual events differ from the assumptions made, the actual cost of the plan will vary as well. Some examples of key assumptions include the interest rate, salary scale, and rates of mortality, turnover and retirement.

Actuarial Present Value of Benefits - This is the present value, as of the valuation date, of future payments for benefits and expenses under the Plan, where each payment is: a) multiplied by the probability of the event occurring on which the payment is conditioned, such as the probability of survival, death, disability, termination of employment, etc.; and b) discounted at the assumed interest rate.

Actuarial Value of Assets - This is the value of cash, investments and other property belonging to the plan, typically adjusted to recognize investment gains or losses over a period of years to dampen the impact of market volatility on the Actuarially Determined Contribution.

Actuarially Determined Contribution ("ADC") - This is the employer's periodic contributions to a defined benefit plan, calculated in accordance with actuarial standards of practice.

Attribution Period - The period of an employee's service to which the expected benefit obligation for that employee is assigned. The beginning of the attribution period is the employee's date of hire and costs are spread across all employment.

Interest Rate - This is the long-term expected rate of return on any investments set aside to pay for the benefits. In a financial reporting context (e.g., GASB 68) this is termed the Discount Rate.

Normal Cost - This is the portion of the Actuarial Present Value of Benefits allocated to a valuation year by the Actuarial Cost Method.

Past Service Cost - This is a catch-up payment to fund the Unfunded Accrued Liability over time (generally 10 to 30 years). A closed amortization period is a specific number of years counted from one date and reducing to zero with the passage of time; an open amortization period is one that begins again or is recalculated at each valuation date. Also known as the Amortization Payment.

Return on Plan Assets - This is the actual investment return on plan assets during the fiscal year.

Unfunded Accrued Liability - This is the excess of the Accrued Liability over the Actuarial Value of Assets.

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor

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RETIREMENT PLAN FOR EMPLOYEES OF THE TOWN OF SOUTH WINDSOR - BOARD OF EDUCATION

Actuarial Valuation as of July 1, 2020 To Determine Funding for Fiscal Year 2021-22

Prepared by

Michelle L. Boyles, FSA Consulting Actuary

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July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

Certification

We have performed an actuarial valuation of the Plan as of July 1, 2020 to determine funding for fiscal year 2021-22. This report presents the results of our valuation.

The ultimate cost of a pension plan is the total amount needed to provide benefits for plan members and beneficiaries and to pay the expenses of administering the plan. Pension costs are met by contributions and by investment return on plan assets. The principal purpose of this report is to set forth an actuarial recommendation of the contribution, or range of contributions, which will properly fund the plan, in accordance with applicable government regulations. In addition, this report provides:

- A valuation of plan assets and liabilities to review the year-to-year progress of funding.
- Information needed to meet disclosure requirements.
- Review of plan experience for the previous year to ascertain whether the assumptions and methods employed for valuation purposes are reflective of actual events and remain appropriate for prospective application.
- Assessment of the relative funded position of the plan, i.e., through a comparison of plan assets and projected plan liabilities.
- Comments on any other matters which may be of assistance in the funding and operation of the plan.

This report may not be used for purposes other than those listed above without Milliman's prior written consent. If this report is distributed to other parties, it must be copied in its entirety, including this certification section.

Milliman's work is prepared solely for the internal business use of the Town of South Windsor. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions: (a) the Town may provide a copy of Milliman's work, in its entirety, to the Town's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work, in its entirety, to other governmental entities, as required by law. No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

In preparing this report, we relied on employee census data and financial information as of the valuation date, furnished by the Town. We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have found them to be reasonably consistent and comparable with data used for other purposes. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete and our calculations may need to be revised. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

July 1, 2020 Actuarial Valuation

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Retirement Plan for Employees of the Town of South Windsor - Board of Education

Certification

Figures for periods prior to July 1, 2015 have been obtained from the valuation reports produced by Southeast Retirement Plan Consulting.

The calculations reported herein have been made on a basis consistent with our understanding of ERISA and the related sections of the tax code. Additional determinations may be needed for purposes other than meeting funding requirements, such as judging benefit security at plan termination or meeting employer accounting requirements. On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate and all costs and liabilities were determined in conformance with generally accepted actuarial principles and practices.

The valuation results were developed using models intended for valuations that use standard actuarial techniques. In addition to these models, Milliman has developed certain models to develop the expected long term rate of return on assets used in this analysis. We have reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice (ASOP). The models including all input, calculations, and output may not be appropriate for any other purpose.

We further certify that, in our opinion, each actuarial assumption, method and technique used is reasonable taking into account the experience of the Plan and reasonable expectations. Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuarial assignment, we did not perform an analysis of the potential range of such future measurement.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

whet J. Boyles

Michelle L. Boyles, FSA Consulting Actuary

Section I - Executive Summary Changes Since the Prior Valuation

Plan Changes

None.

Changes in Actuarial Methods and Assumptions

We lowered the interest rate assumption from 6.75% to 6.50%. This change increased the Accrued Liability by about \$486,000 and increased the Actuarially Determined Contribution by approximately \$59,000.

We changed the Mortality Table from the RP-2000 Combined Healthy Mortality Table with generational projection per Scale BB to the Pub-2010 Mortality Table with generational projection per the MP ultimate scale, with employee rates before benefit commencement and healthy or disabled annuitant rates after benefit commencement.

These mortality changes increased the Accrued Liability by about \$381,000 and the Actuarially Determined Contribution by \$43,000, for a total Accrued Liability increase of \$867,000 and a total Actuarially Determined Contribution increase of \$102,000.

Other Significant Changes

None.

Section I - Executive Summary Assets

There are two different measures of the plan's assets that are used throughout this report. The Market Value is a snapshot of the plan's investments as of the valuation date. The Actuarial Value is a smoothed asset value designed to temper the volatile fluctuations in the market by recognizing investment gains or losses non-asymptotically over five years.

	Market	Actuarial
Value as of July 1, 2019	\$14,553,514	\$14,807,472
Town and Member Contributions	1,596,881	1,596,881
Investment Income	600,459	747,852
Benefit Payments and Administrative Expenses	(1,267,347)	(1,267,347)
Value as of July 1, 2020	15,483,507	15,884,858

For fiscal year 2019-20, the plan's assets earned 4.08% on a Market Value basis and 4.99% on an Actuarial Value basis. The actuarial assumption for this period was 6.75%; the result is an asset loss of about \$0.4 million on a Market Value basis and a loss of about \$0.3 million on an Actuarial Value basis. Historical rates of return are shown in the graph below.



Please note that the Actuarial Value currently exceeds the Market Value by \$0.4 million. This figure represents investment losses that will be gradually recognized in future years. This process will exert upward pressure on the Town's contribution, unless there are offsetting market gains.

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

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Section I - Executive Summary Assets (continued)

The graph below shows how this year's asset values compare to where the plan's assets have been over the past several years and how they are projected to change over the next 20 years. For purposes of this projection, we have assumed that the Town always contributes the Actuarially Determined Contribution and the investments always earn the assumed interest rate each year.



In 2019-20, the plan paid out \$1.2 million in benefits to members. Over the next 20 years, the plan is projected to pay out a total of \$32 million in benefits to members.



Benefit Payments

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

Page 5

Section I - Executive Summary Membership

There are three basic categories of plan members included in the valuation: (1) members who are receiving monthly pension benefits, (2) former employees who have a vested right to benefits but have not yet started collecting, and (3) active employees who have met the eligibility requirements for membership.



Members in Pay Status on July 1, 2020

Service Retirees	73	Average Age	72.8
Disabled Retirees	0	Total Annual Benefit	\$1,002,590
Beneficiaries	4	Average Annual Benefit	13,021
Total	77		

The members in pay status fall across a wide distribution of ages:



July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

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Section I - Executive Summary Membership (continued)

Terminated Vested Members on July 1, 2020

Count	19
Average Age	57.6
Total Annual Benefit	\$84,669
Average Annual Benefit	4,456

Active Members on July 1, 2020

Count	60
Average Age	54.9
Average Service	15.9
Payroll	\$3,705,922
Average Payroll	61,765

The table below illustrates the age and years of service of the active membership:

				Years of	f Service			
Age < 25 25-29 30-34 35-39	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total 0 0 0
40-44		1	3					4
45-49	3	2	1	1				7
50-54		4	3	3	1	2		13
55-59	2	7	7	2	4	1		23
60-64		3	3	1	3			10
65+			1	1	1			3
Total	5	17	18	8	9	3	0	60

Section I - Executive Summary Accrued Liability

The Accrued Liability as of July 1, 2020 consists of the following pieces:



The Accrued Liability for active members can be broken down further by the different types of benefits provided by the plan:



July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

Unfunded Accrued Liability (\$ millions)

Section I - Executive Summary Funded Status

The Accrued Liability grows over time as active members earn additional benefits, and goes down over time as members receive benefits; it may also change when there are changes to the plan provisions or changes in the actuarial assumptions. The Unfunded Accrued Liability is the dollar difference between the Accrued Liability and the Actuarial Value of Assets; the Funded Ratio is the ratio of the two.







July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

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Section I - Executive Summary Actuarially Determined Contribution

The Actuarially Determined Contribution consists of three pieces: a Normal Cost payment to fund the benefits earned each year, a Past Service Cost to gradually reduce any unfunded or surplus liability, and Interest to reflect the timing of the contribution relative to the valuation date.

The Actuarially Determined Contribution for fiscal year 2021-22 is shown graphically below, along with the comparable figures for the preceding four fiscal years. Note that the Normal Cost is relatively consistent from year to year, whereas the Past Service Cost tends to be more volatile since it reflects the impact of asset performance.



Section I - Executive Summary Long-Range Forecast

If the Town pays the Actuarially Determined Contribution each year, the investments earn exactly the assumed interest rate each year, and there are no changes in the plan provisions or in the actuarial methods and assumptions, then we project the following changes in the plan's funded status and the long-range contribution levels:



To the extent that there are future investment or liability gains or losses, changes in the actuarial assumptions or methods, or plan changes, the actual valuation results will differ from these forecasts. Please see Section III C for more details of the long range forecast.

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

Section I - Executive Summary Long-Range Forecast (continued)

Pension benefits are paid for through a combination of contributions from the Town and from employees, and from investment income. If the Town pays less than the Actuarially Determined Contribution each year, or if the investments persistently earn less than the assumed interest rate, then the plan's funded status would suffer, and to compensate, the Town's contribution levels would be pushed higher. The risks of underfunding and underearning are illustrated in the hypothetical scenarios below:





The scenarios illustrated above are based on deterministic projections that assume emerging plan experience always exactly matches the actuarial assumptions; in particular that actual asset returns will be constant in every year of the projection period. Variation in asset returns, contribution amounts, and many other factors may have a significant impact on the long-term financial health of the plan, the liquidity constraints on plan assets, and the Town's future contribution levels. Stochastic projections could be prepared that would enable the Town to understand the potential range of future results based on the expected variability in asset returns and other factors. Such analysis was beyond the scope of this engagement.

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

Section I - Executive Summary Summary of Principal Results

Membership as of	July 1, 2019	July 1, 2020
Active Members	64	60
Terminated Members	17	19
Members in Pay Status	<u>75</u>	<u>77</u>
Total Count	156	156
Payroll	\$3,779,805	\$3,705,922
Assets and Liabilities as of	July 1, 2019	July 1, 2020
Market Value of Assets	\$14,553,514	\$15,483,507
Actuarial Value of Assets	14,807,472	15,884,858
Accrued Liability for Active Members	7,545,031	7,833,755
Accrued Liability for Terminated Members	794,971	911,696
Accrued Liability for Members in Pay Status	<u>9,323,895</u>	<u>10,249,352</u>
Total Accrued Liability	17,663,897	18,994,803
Unfunded Accrued Liability	2,856,425	3,109,945
Funded Ratio	83.8%	83.6%
Actuarially Determined Contribution for Fiscal Year	2020-21	2021-22
Normal Cost	\$310,069	\$343,066
Past Service Cost	224,465	243,533
Interest	<u>36,081</u>	<u>38,129</u>
Actuarially Determined Contribution	570,615	624,728

July 1, 2020 Actuarial Valuation Retirement Plan for Employees of the Town of South Windsor - Board of Education

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Section II - Plan Assets A. Summary of Fund Transactions

Market Value as of July 1, 2019	\$14,553,514
Town Contributions	1,424,037
Member Contributions	172,844
Net Investment Income	600,459
Benefit Payments	(1,222,131)
Administrative Expenses	(45,216)
Market Value as of June 30, 2020	15,483,507
Expected Return on Market Value of Assets	993,406
Market Value (Gain)/Loss	392,947
Approximate Rate of Return *	4.08%

* The rate shown here is not the dollar or time weighted investment yield rate which measures investment performance. It is an approximate net return assuming all activity occurred on average midway through the fiscal year.

Target Asset Allocation as of June 30, 2020



- Fixed Income
- Other



July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

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Section II - Plan Assets B. Development of Actuarial Value of Assets

In order to minimize the impact of market fluctuations on the contribution level, we use an Actuarial Value of Assets that recognizes gains and losses in equal installments ('non-asymptotically') over a five year period. The Actuarial Value of Assets as of July 1, 2020 is determined below.

1.	Expected Market Value of Assets:	
	a. Market Value of Assets as of July 1, 2019	\$14,553,514
	b. Town and Member Contributions	1,596,881
	c. Benefit Payments and Administrative Expenses	(1,267,347)
	d. Expected Earnings Based on 6.75% Interest	<u>993,406</u>
	e. Expected Market Value of Assets as of July 1, 2020	15,876,454
2.	Actual Market Value of Assets as of July 1, 2020	15,483,507
3.	Market Value (Gain)/Loss: (1e) - (2)	392,947

4. Delayed Recognition of Market (Gains)/Losses

	Plan Year End 06/30/2020 06/30/2019 06/30/2018 06/30/2017	(Gain)/Loss \$392,947 462,582 (197,743) (557,293)	Percent Not Recognized 80% 60% 40% 20%	Amount Not Recognized \$314,358 277,549 (79,097) (111,459)	401.351	
5.	Preliminary Actuaria	l Value of Assets as of	July 1, 2020: (2) + (4)	15,884,858	
6.	Corridor Limit:	80% of Market Value 120% of Market Value			12,386,806 18,580,208	
7.	7. Final Actuarial Value of Assets as of July 1, 2020: (5) constrained by (6)					
8.	8. Return on Actuarial Value of Assets:					
9.	. Approximate Rate of Return on Actuarial Value of Assets					
10.). Actuarial Value (Gain)/Loss					

July 1, 2020 Actuarial Valuation

5.

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Retirement Plan for Employees of the Town of South Windsor - Board of Education

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Section III - Development of Contribution A. Past Service Cost

In determining the Past Service Cost, the Unfunded Accrued Liability is amortized as a level dollar amount. Beginning on July 1, 2015, the amortization period is 29 years (closed).

		July 1, 2019	July 1, 2020
1.	Accrued Liability		
	Active Members	\$7,545,031	\$7,833,755
	Terminated Members	794,971	911,696
	Service Retirees	8,940,970	9,934,005
	Disabled Retirees	0	0
	Beneficiaries	<u>382,925</u>	<u>315,347</u>
	Total Accrued Liability	17,663,897	18,994,803
2.	Actuarial Value of Assets	14,807,472	15,884,858
	(see Section IIB)		
3.	Unfunded Accrued Liability: (1) - (2)	2,856,425	3,109,945
4.	Funded Ratio: (2) / (1)	83.8%	83.6%
5.	Amortization Period	25	24
6.	Amortization Growth Rate	0.00%	0.00%
7.	Past Service Cost: (3) amortized over (5)	224,465	243,533

		2020-21	2021-22
1.	Total Normal Cost	\$437,107	\$461,920
2.	Expected Member Contributions	168,638	165,454
3.	Expected Administrative Expenses	41,600	46,600
4.	Net Normal Cost: (1) - (2) + (3)	310,069	343,066
5.	Past Service Cost (see Section IIIA)	224,465	243,533
6.	Interest on (4) + (5) to the start of the fiscal year	36,081	38,129
7.	Actuarially Determined Contribution: $(4) + (5) + (6)$	570,615	624,728

Section III - Development of Contribution B. Actuarially Determined Contribution

Section III - Development of Contribution C. Long Range Forecast

This forecast is based on the results of the July 1, 2020 actuarial valuation and assumes that the Town will pay the Actuarially Determined Contribution each year, the assets will return the assumed interest rate on a market value basis each year, and there are no future changes in the actuarial methods or assumptions or in the plan provisions. For purposes of this forecast the amortization period declines to 1 year to illustrate the progress of the plan towards becoming fully funded; in actual practice the amortization period will not be less than 10 years in order to shield the Town from contribution volatility. Actual results at each point in time will yield different values, reflecting the actual experience of the plan membership and assets.

-	Values as of the Valuation Date				Cash Flo	ws Projected to t	he Following Fis	scal Year	
-		Actuarial	Unfunded						
Valuation	Accrued	Value of	Accrued	Funded	Fiscal	Town	Member	Benefit	Net
Date	Liability	Assets	Liability	Ratio	Year	Contributions	Contributions	Payments	Cash Flows
07/01/2020	\$18,994,803	\$15,884,858	\$3,109,945	83.6%	2021-22	\$624,728	\$160,664	(\$1,088,951)	(\$303,559)
07/01/2021	19,595,000	16,461,000	3,134,000	84.0%	2022-23	622,000	157,000	(1,117,000)	(338,000)
07/01/2022	20,217,000	17,012,000	3,205,000	84.1%	2023-24	627,000	153,000	(1,152,000)	(372,000)
07/01/2023	20,838,000	17,531,000	3,307,000	84.1%	2024-25	633,000	148,000	(1,209,000)	(428,000)
07/01/2024	21,448,000	18,149,000	3,299,000	84.6%	2025-26	627,000	139,000	(1,287,000)	(521,000)
07/01/2025	22,020,000	18,833,000	3,187,000	85.5%	2026-27	606,000	132,000	(1,339,000)	(601,000)
07/01/2026	22,519,000	19,464,000	3,055,000	86.4%	2027-28	587,000	124,000	(1,420,000)	(709,000)
07/01/2027	22,972,000	20,052,000	2,920,000	87.3%	2028-29	566,000	111,000	(1,530,000)	(853,000)
07/01/2028	23,343,000	20,564,000	2,779,000	88.1%	2029-30	536,000	98,000	(1,634,000)	(1,000,000)
07/01/2029	23,583,000	20,960,000	2,623,000	88.9%	2030-31	506,000	85,000	(1,735,000)	(1,144,000)
07/01/2030	23,690,000	21,228,000	2,462,000	89.6%	2031-32	472,000	73,000	(1,820,000)	(1,275,000)
07/01/2031	23,656,000	21,361,000	2,295,000	90.3%	2032-33	446,000	62,000	(1,895,000)	(1,387,000)
07/01/2032	23,497,000	21,368,000	2,129,000	90.9%	2033-34	422,000	52,000	(1,955,000)	(1,481,000)
07/01/2033	23,217,000	21,256,000	1,961,000	91.6%	2034-35	398,000	44,000	(1,996,000)	(1,554,000)
07/01/2034	22,827,000	21,039,000	1,788,000	92.2%	2035-36	379,000	38,000	(2,014,000)	(1,597,000)
07/01/2035	22,346,000	20,729,000	1,617,000	92.8%	2036-37	367,000	34,000	(2,011,000)	(1,610,000)
07/01/2036	21,800,000	20,354,000	1,446,000	93.4%	2037-38	356,000	30,000	(2,022,000)	(1,636,000)
07/01/2037	21,208,000	19,938,000	1,270,000	94.0%	2038-39	346,000	26,000	(2,023,000)	(1,651,000)
07/01/2038	20,558,000	19,466,000	1,092,000	94.7%	2039-40	337,000	22,000	(2,008,000)	(1,649,000)
07/01/2039	19,854,000	18,946,000	908,000	95.4%	2040-41	326,000	19,000	(1,987,000)	(1,642,000)

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

This work product was prepared solely for the Town for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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	Actuarial		Unfunded	
Valuation	Value of	Accrued	Accrued	Funded
Date	Assets	Liability	Liability	Ratio
January 1, 2011	\$8,394,835	\$9,941,840	\$1,547,005	84.4%
January 1, 2012	9,116,329	10,655,240	1,538,911	85.6%
January 1, 2013	9,688,718	11,326,679	1,637,961	85.5%
January 1, 2014	10,516,003	12,616,929	2,100,926	83.3%
July 1, 2015	12,130,210	15,209,515	3,079,305	79.8%
July 1, 2016	12,862,906	16,274,991	3,412,085	79.0%
July 1, 2017	13,637,467	15,785,520	2,148,053	86.4%
July 1, 2018	14,363,393	16,720,038	2,356,645	85.9%
July 1, 2019	14,807,472	17,663,897	2,856,425	83.8%
July 1, 2020	15,884,858	18,994,803	3,109,945	83.6%

Section III - Development of Contribution D. History of Funded Status

Sectio	n III - Development of Contribution
Ε.	History of Town Contributions

				Actual
	Actuarially	Actual		Contribution
Fiscal	Determined	Town		as a Percent of
Year	Contribution	Contribution	Payroll	Payroll
2011-12	\$481,339	\$752,056	\$3,419,019	22.0%
2012-13	443,288	\$518,288	3,012,321	17.2%
2013-14	450,378	\$922,555	3,085,477	29.9%
2014-15	535,965	\$268,665	3,122,271	8.6%
2015-16	535,965	\$535,965	3,122,271	17.2%
2016-17	549,460	\$549,460	3,274,814	16.8%
2017-18	603,433	\$603,433	3,133,452	19.3%
2018-19	530,051	\$530,051	3,897,575	13.6%
2019-20	557,209	\$1,424,037	4,003,396	35.6%
2020-21	570,615	TBD	3,779,805	TBD
2021-22	624,728	TBD	3,705,922	TBD

Section IV - Membership Data A. Reconciliation of Membership from Prior Valuation

Details of the changes in the Plan membership since the last valuation are shown below. Additional details on the Plan membership are provided in the remainder of Section IV.

	Active Members	Terminated Vested Members	Nonvested Members Due Refunds	Service Retirees	Disabled Retirees	Beneficiaries	Total
Count July 1, 2019	64	17	0	70	0	5	156
Terminated							
- no benefits due	-	-	-	-	-	-	0
- paid refund	-	-	-	-	-	-	0
- vested benefits due	(2)	1	1	-	-	-	0
Retired	(3)	-	-	3	-	-	0
Died							
- with beneficiary	-	-	-	-	-	-	0
- no beneficiary	-	-	-	-	-	(1)	(1)
Benefits expired	-	-	-	-	-	-	0
New member	1	-	-	-	-	-	1
Rehired	-	-	-	-	-	-	0
New Alternate Payee	-	-	-	-	-	-	0
Correction	-	-	-	-	-	-	0
Count July 1, 2020	60	18	1	73	0	4	156

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	As of	As of	
	July 1, 2019	July 1, 2020	
Number of Active Members	64	60	
Average Age	54.7	54.9	
Average Service	15.6	15.9	
Total Payroll	\$3,779,805	\$3,705,922	
Average Payroll	59,059	61,765	

Section IV - Membership Data B. Statistics of Active Membership

	As of	As of
	July 1, 2019	July 1, 2020
Termineted Vectod Nembers		
Number	17	10
	17	19
I otal Annual Benefit	\$80,307	\$84,669
Average Annual Benefit	4,724	4,456
Average Age	57.0	57.6
Service Retirees		
Number	70	73
Total Annual Benefit	\$894,985	\$970,134
Average Annual Benefit	12,786	13,290
Average Age	72.0	72.8
Disabled Retirees		
Number	0	0
Total Annual Benefit	\$0	\$0
Average Annual Benefit	0	0
Average Age	0.0	0.0
Beneficiaries		
Number	5	4
Total Annual Benefit	\$41,122	\$32,456
Average Annual Benefit	8.224	8,114
Average Age	72.8	72.4
0	1 2.0	. =

Section IV - Membership Data C. Statistics of Inactive Membership

July 1, 2020 Actuarial Valuation Retirement Plan for Employees of the Town of South Windsor - Board of Education

Section IV - Membership Data D. Distribution of Inactive Members as of July 1, 2020

			Monthly
	Age	Number	Benefits
Terminated Vested Members	< 30	0	\$0
	30 - 39	1	0
	40 - 49	1	0
	50 - 59	8	3,464
	60 - 64	7	3,292
	65 +	<u>2</u>	<u>300</u>
	Total	19	7,056
Service Retirees	< 50	0	\$0
	50 - 59	0	0
	60 - 69	28	36.640
	70 - 79	32	34.273
	80 - 89	13	9,931
	90 +	0	0
	Total	73	80,844
Disabled Retirees	< 50	0	\$0
	50 - 59	0	0
	60 - 69	0	0
	70 - 79	0	0
	80 - 89	0	0
	90 +	0	0
	Total	0	0
Beneficiaries	< 50	0	\$0
Benenolaries	50 - 59	0	φ υ 0
	60 - 69	2	1 640
	70 - 79	1	848
	80 - 89	1	217
	90 +	0	0
	Total	<u> </u>	<u>2.705</u>

July 1, 2020 Actuarial Valuation

Retirement Plan for Employees of the Town of South Windsor - Board of Education

Section V - Analysis of Risk A. Introduction

The results of this actuarial valuation are based on one set of reasonable assumptions. However, it is almost certain that future experience will not exactly match these assumptions. As an example, the plan's investments may perform better or worse than assumed in any single year and over any longer time horizon. It is therefore important to consider the potential impacts of these likely differences when making decisions that may affect the future financial health of the plan, or of the plan's members.

In addition, as plans mature they accumulate larger pools of assets and liabilities. The increase in size in turn increases the potential magnitude of adverse experience. As an example, the dollar impact of a 10% investment loss on a plan with \$1 billion in assets and liabilities is much greater than the dollar impact for a plan with \$1 million in assets and liabilities. Since pension plans make long-term promises and rely on long-term funding, it is important to consider how mature the plan is today, and how mature it may become in the future.

Actuarial Standard of Practice No. 51 (ASOP 51) directs actuaries to provide pension plan sponsors with information concerning the risks associated with the plan:

- Identify risks that may be significant to the plan.
- Assess the risks identified as significant to the plan. The assessment does not need to include numerical calculations.
- Disclose plan maturity measures and historical information that are significant to understanding the plan's risks.

This section of the report uses the framework of ASOP 51 to communicate important information about significant risks to the plan, the plan's maturity, and relevant historical plan data.

Please see Section III C for more information on the basis for the projected results shown on the following pages.

Section V - Analysis of Risk B. Risk Identification and Assessment

Investment Risk

Definition: This is the potential that investment returns will be different than expected.

Identification: To the extent that actual investment returns differ from the assumed investment return, the plan's future assets, Actuarially Determined Contributions, and funded status may differ significantly from those presented in this valuation. The consequences of persistent underperformance on future Actuarially Determined Contribution levels are illustrated below:



Contribution Risk

Definition: This is the potential that actual future contributions will be less than the Actuarially Determined Contribution.

Identification: Over the past 9 years, actual contributions have been 130.2% of the Actuarially Determined Contribution in total. The consequences of persistent underfunding on future Actuarially Determined Contribution levels are illustrated below:



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Section V - Analysis of Risk B. Risk Identification and Assessment

Liquidity Risk

Definition: This is the potential that assets must be liquidated at a loss earlier than planned in order to pay for the plan's benefits and operating costs. This risk is heightened for plans with negative cash flows, in which contributions are not sufficient to cover benefit payments plus expenses.

Identification: In 2019-20, the plan had positive cash flow, with town and member contributions to the plan of \$1,596,881 compared to \$1,267,347 of benefit payments and administrative expenses paid out of the plan. We suggest that you consult with your investment advisors with respect to the liquidity characteristics of the plan's investment holdings.

Maturity Risk

Definition: This is the potential for total plan liabilities to become more heavily weighted toward inactive liabilities over time, and for plan assets and/or liabilities to become larger relative to the active member liability.

Identification: The plan is subject to maturity risk because as plan assets and liabilities continue to grow, the dollar impact of any gains or losses on the assets or liabilities also becomes larger.

Assessment: As of July 1, 2020, the plan's Asset Voliatility Ratio (the ratio of the market value of plan assets to payroll) is 4.2. According to Milliman's 2018 Public Pension Funding Study, the 100 largest US public pension plans have the following range of Asset Volatility Ratios:



Inflation Risk

Definition: This is the potential for a pension to lose purchasing power over time due to inflation.

Identification: The members of pension plans without fully inflation-indexed benefits are subject to the risk that their purchasing power will be reduced over time due to inflation.

Assessment: This plan does not contain a mechanism to regularly increase benefits after retirement, so members bear all of the inflation risk.

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Retirement Plan for Employees of the Town of South Windsor - Board of Education
Section V - Analysis of Risk B. Risk Identification and Assessment

Insolvency Risk

Definition: This is the potential that a plan will become insolvent; that is, assets will be fully depleted.

Identification: If a plan becomes insolvent, contractually required benefits must be paid from the plan sponsor's other remaining assets.

Assessment: Under the GASB 68 depletion date methodology, the plan is not projected to become insolvent. Please see the GASB 68 report for more details on the underlying analysis.

Demographic Risks

Definition: This is the potential that mortality, turnover, retirement, or other demographic experience will be different than expected.

Identification: The pension liabilities reported herein have been calculated by assuming that members will follow patterns of demographic experience as described in Appendix B. If actual demographic experience or future demographic assumptions are different from what is assumed to occur in this valuation, future pension liabilities, Actuarially Determined Contributions, and funded status may differ significantly from those presented in this valuation. Formal Experience Studies performed on a regular basis are helpful in ensuring that the demographic assumptions reflect emerging plan experience.

Retirement Risk

Definition: This is the potential for members to retire and receive subsidized benefits that are more valuable than expected.

Identification: This plan has valuable early retirement benefits. If members retire at earlier ages than are anticipated by the actuarial assumptions, this will put upward pressure on subsequent Actuarially Determined Contributions.

Section V - Analysis of Risk C. Maturity Measures

The metrics presented below are different ways of understanding the plan's maturity level, both in the past and as it is expected to change in the coming years.

Asset Volatility Ratio: Market Value of Assets compared to Payroll



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Retirement Plan for Employees of the Town of South Windsor - Board of Education

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Appendix A - Actuarial Funding Method

The actuarial funding method used in the valuation of this Plan is known as the Entry Age Normal Method. The Actuarially Determined Contribution consists of three pieces: Normal Cost plus a Past Service Cost payment to gradually eliminate the Unfunded Accrued Liability plus Interest to reflect the timing of the contribution relative to the valuation date.

The Normal Cost is determined by calculating the present value of future benefits for present active Members that will become payable as the result of death, disability, retirement or termination. This cost is then spread as a level percentage of earnings from entry age to termination as an Active Member. If Normal Costs had been paid at this level for all prior years, a fund would have accumulated. Because this fund represents the portion of benefits that would have been funded to date, it is termed the Accrued Liability. In fact, it is calculated by adding the present value of benefits for Retired Members and Terminated Vested Members to the present value of benefits for Active Members and subtracting the present value of future Normal Cost contributions.

The funding cost of the Plan is derived by making certain specific assumptions as to rates of interest, mortality, turnover, etc. which are assumed to hold for many years into the future. Since actual experience may differ somewhat from the assumptions, the costs determined by the valuation must be regarded as estimates of the true costs of the Plan.

The Unfunded Accrued Liability is the excess of the Accrued Liability over the assets which have been accumulated for the plan. This Unfunded Accrued Liability is amortized as a level dollar amount. Beginning on July 1, 2015, the amortization period is 29 years (closed).

The Actuarial Value of Assets is determined by recognizing market gains and losses non-asymptotically over a five year period. so long as the resulting value is within +/- 20% of the Market Value.

The long-range forecasts included in this report have been developed by assuming that members will terminate, retire, become disabled, and die according to the actuarial assumptions with respect to these causes of decrement, and that pay increases, cost of living adjustments, and so forth will likewise occur according to the actuarial assumptions.

Appendix B - Actuarial Assumptions

Each of the assumptions used in this valuation was set based on industry standard published tables and data, the particular characteristics of the plan, relevant information from the plan sponsor or other sources about future expectations, and our professional judgment regarding future plan experience. We believe the assumptions are reasonable for the contingencies they are measuring, and are not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

Interest	6.50% (prior: 6.75%)
Inflation	2.70%
Salary Scale	3.00%

Amortization Growth Rate 0.00%

Mortality

Current:

PubG-2010 Mortality Table with generational projection per the MP ultimate scale, with employee rates before benefit commencement and healthy or disabled annuitant rates after benefit commencement. This assumption includes a margin for improvements in longevity beyond the valuation date.

Prior:

RP-2000 Combined Healthy Mortality Table with generational projection per Scale BB.

Turnover	Age	Males	Females
	25	7.72%	7.72%
	30	7.22%	7.22%
	35	6.28%	6.28%
	40	5.12%	5.12%
	45	3.98%	3.98%
	50	2.56%	2.56%
	55	0.94%	0.94%
	60	0.09%	0.09%

Rate of Retirement

If eligible for Normal Retirement, based on the following table:

Age	Rate
< 60	2%
60-61	5%
62	20%
63-64	10%
65	50%
66-69	40%
70	100%

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Retirement Plan for Employees of the Town of South Windsor - Board of Education

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Appendix B - Actuarial Assumptions

Rate of Disability	Age	Males	Females	
	25	0.06%	0.06%	
	30	0.06%	0.06%	
	35	0.09%	0.09%	
	40	0.18%	0.18%	
	45	0.31%	0.31%	
	50	0.49%	0.49%	
	55	0.80%	0.80%	
	60	1.20%	1.20%	
Marital Status	75% of membe than husbands.	ers are assumed to	be married with wives	1 year younger
Cost of Living Adjustments	None.			
Expenses	Administrative e the nearest \$10	expenses paid in prio 0.	r year increased by 3%	and rounded to

Appendix C - Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan. It is not intended to be, nor should it be interpreted as a complete statement of all plan provisions. All eligibility requirements and benefit amounts shall be determined in strict accordance with the plan document itself. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

Eligibility	Management, Custodians/Maintainers, Secretaries, and Nurses of the Board of Education who have attained age 21 and completed one year of continuous service. Effective July 1, 2015, no new hires are eligible to participate in the defined benefit plan.
Credited Service	Whole years and completed months of service during which the employee made required contributions.
Final Average Earnings	Average of the member's basic earnings for the 60 months prior to retirement, termination, disability, or death.
Employee Contributions	Custodians/Maintainers - 5% of basic earnings.
	All others - 4.5% of basic earnings.
Credited Interest	5% per annum.
Normal Retirement Date	Custodians/Maintainers - The first day of the month coinciding with or next following the Participant's 60th birthday.
	All others - The first day of the month coinciding with or next following the Participant's 62nd birthday.
Normal Retirement Benefit	<u>Custodians/Maintainers</u> 2.25% of Final Average Earnings multiplied by the first 20 years of Credited Service plus 2.50% of Final Average Earnings for up to the next 10 years of Credited Service, subject to a maximum of 70% of Final Average Earnings.
	<u>All Others</u> 2.00% of Final Average Earnings multiplied by years of Credited Service, subject to a maximum of 50% of Final Average Earnings.
Early Retirement Date	The first day of the month within 10 years of Normal Retirement Date.
Early Retirement Benefit	Benefit is based on Credited Service and Final Average Earnings to actual retirement date reduced by an early retirement reduction for the number of months the early retirement date precedes the normal retirement date as defined in the plan.

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Appendix C - Summary of Plan Provisions

Deferred Retirement Date	Members may continue to work beyond Normal Retirement Date.
Deferred Retirement Benefit	Benefit is based on Credited Service and Final Average Earnings to actual retirement date.
Vesting Percentage	100% vested after five years of continuous service. Participants eligible for early retirement are 100% vested. Years of continuous service during which the employee elected not to make required employee contributions are excluded.
Termination Benefit	Benefit accrued to date of termination with payment commencing on Normal Retirement Date.
Disability Benefit Eligibility	Completion of 10 years of continuous service and certified by the employer as permanently and totally disabled.
Disability Benefit	50% of benefit accrued to disability retirement date.
Death Benefit Eligibility	Age 50 with 3 years of service and married for at least one year.
Death Benefit	50% of the participant's accrued benefit reduced 0.5% for each year the spouse is more than 5 years younger than the participant but not less than 40%. The minimum monthly benefit is \$10.
Death / Termination Refund	Refund of Employee Contributions with interest to date of termination or death, if not eligible for Spouse benefit.
Normal Form	Modified Cash Refund.

Appendix D - Glossary

Actuarial Cost Method - This is a procedure for determining the Actuarial Present Value of Benefits and allocating it to time periods to produce the Actuarial Accrued Liability and the Normal Cost.

Accrued Liability - This is the portion of the Actuarial Present Value of Benefits attributable to periods prior to the valuation date by the Actuarial Cost Method (i.e., that portion not provided by future Normal Costs).

Actuarial Assumptions - With any valuation of future benefits, assumptions of anticipated future events are required. If actual events differ from the assumptions made, the actual cost of the plan will vary as well. Some examples of key assumptions include the interest rate, salary scale, and rates of mortality, turnover and retirement.

Actuarial Present Value of Benefits - This is the present value, as of the valuation date, of future payments for benefits and expenses under the Plan, where each payment is: a) multiplied by the probability of the event occurring on which the payment is conditioned, such as the probability of survival, death, disability, termination of employment, etc.; and b) discounted at the assumed interest rate.

Actuarial Value of Assets - This is the value of cash, investments and other property belonging to the plan, typically adjusted to recognize investment gains or losses over a period of years to dampen the impact of market volatility on the Actuarially Determined Contribution.

Actuarially Determined Contribution ("ADC") - This is the employer's periodic contributions to a defined benefit plan, calculated in accordance with actuarial standards of practice.

Attribution Period - The period of an employee's service to which the expected benefit obligation for that employee is assigned. The beginning of the attribution period is the employee's date of hire and costs are spread across all employment.

Interest Rate - This is the long-term expected rate of return on any investments set aside to pay for the benefits. In a financial reporting context (e.g., GASB 68) this is termed the Discount Rate.

Normal Cost - This is the portion of the Actuarial Present Value of Benefits allocated to a valuation year by the Actuarial Cost Method.

Past Service Cost - This is a catch-up payment to fund the Unfunded Accrued Liability over time (generally 10 to 30 years). A closed amortization period is a specific number of years counted from one date and reducing to zero with the passage of time; an open amortization period is one that begins again or is recalculated at each valuation date. Also known as the Amortization Payment.

Return on Plan Assets - This is the actual investment return on plan assets during the fiscal year.

Unfunded Accrued Liability - This is the excess of the Accrued Liability over the Actuarial Value of Assets.

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