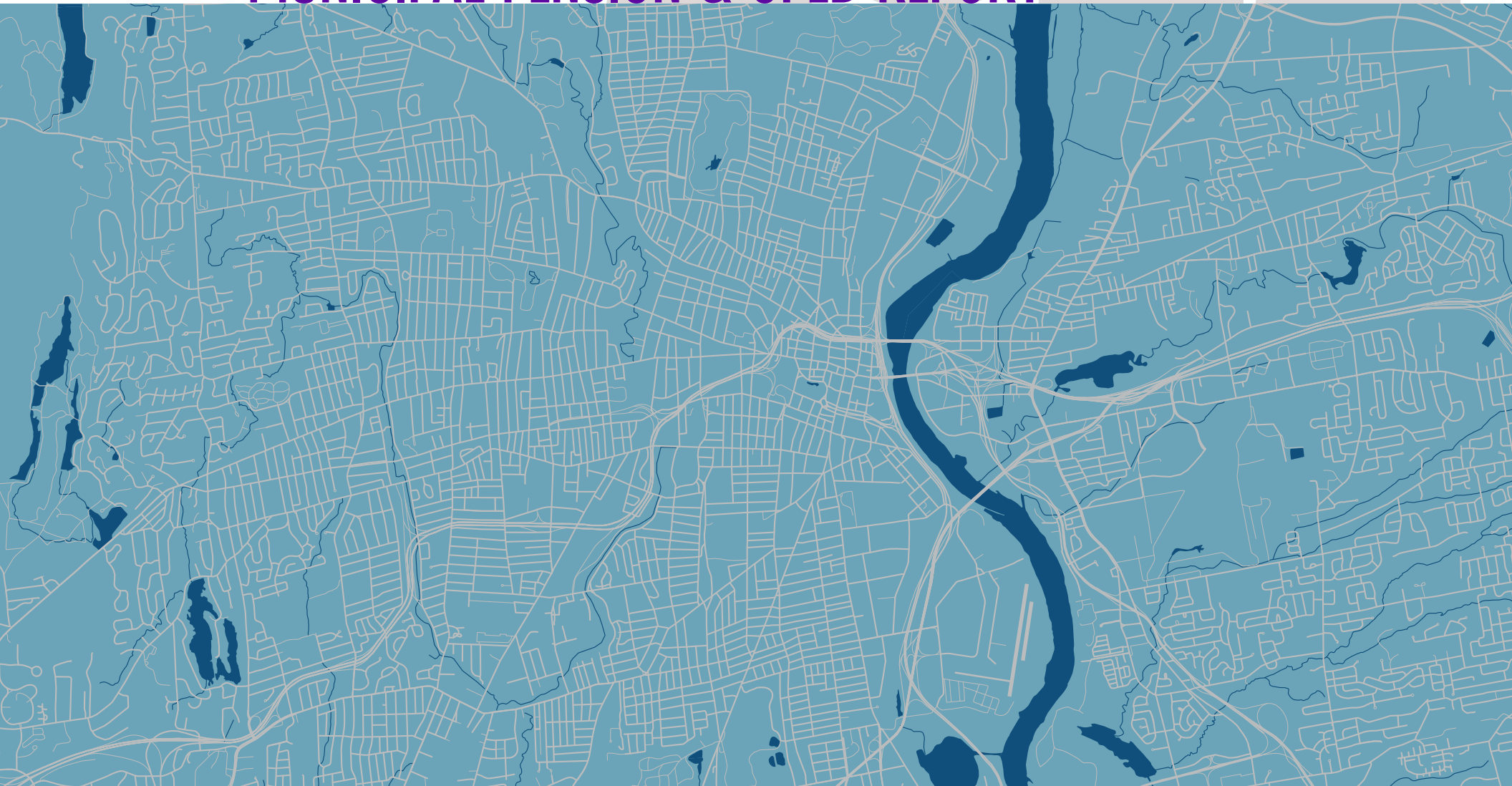


2022

MUNICIPAL PENSION & OPEB REPORT



INTRODUCTION



Whether you call it market volatility, fluctuations, or simply a roller coaster ride, we think you can agree this past year has certainly experienced both opportunities and obstacles.

In our fourth annual Municipal Pension & OPEB Report, we seek to help you understand how the current trends have impacted pension and post-retirement benefit plans using data extracted from the Comprehensive Annual Financial Reports (CAFRs) submitted by local municipalities in Connecticut for the fiscal year ending June 30, 2021. As you may know, the CAFR data is extensive. We have broken it down for you, and encourage you to use this information to benchmark your plans against the report findings.

Historic Fiscal 2021 investment returns were quite clearly an exception and not the rule. Most public pension plans are wisely preparing for lower Fiscal 2022 investment returns and higher interest rates, coupled with uncertainty in regard to inflation and market volatility. In addition, slowdowns in hiring, beginning with the Great Recession and possibly accelerated by the Great Resignation, have reduced the number of active employees and increased the number of retired beneficiaries drawing from funds.

Plan sponsors are also continuing the trend of setting the assumed rate of return at lower, more achievable targets to decrease the likelihood of accruing unfunded liabilities in the future.

We hope you find the results of our 2022 Municipal Pension and OPEB Report useful. Your H&H consultant welcomes the opportunity to discuss the findings in more detail with you.

Steve A. Lemanski, FSA, FCA, MAAA

Vice President, Practice Leader

860.856.2073

SLemanski@hhconsultants.com



PENSION PLANS

200

municipal pension plans

70,000

participants

\$13.9 billion

pension fund assets

OPEB PLANS

175

municipal OPEB plans

119,000

participants

\$9.7 billion

actuarial accrued liability

CAFRs data FYE June 30, 2021

PENSION

MUNICIPAL PENSION DATA

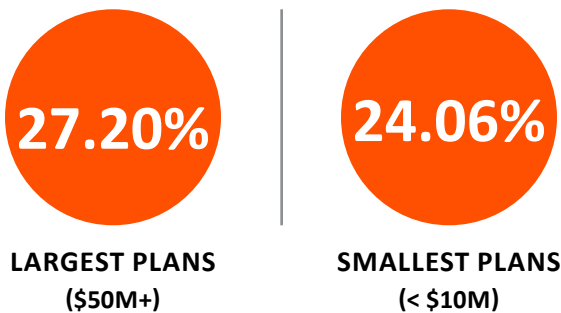


KEY TAKEAWAYS

Municipalities with Pension plans:

With life expectancies increasing and the cost of living rising, it's more important than ever to offer employees a pension plan benefit that can assist with expenses in retirement. Pension and OPEB plans continue to provide valuable benefits for public sector employees and retirees, although increased funding costs and volatility have played a role in recent years.

PENSION PLAN SPONSORS SHOULD BE QUITE HAPPY WITH FISCAL 2021 RETURNS



Our analysis of the money-weighted rate of return by plan size, both for FYE 2021 and for the equivalent 5-year period, revealed superior performance versus FYE 2020 in all plan size categories.

Consistent with the results of our analysis of the investment return assumption, we found that larger plans generally achieved a higher average money-weighted rate of return versus smaller plans.

However, unlike last year's report the FYE 2021 data reveals that largest plans (\$50M+) outperformed the smallest plans, with returns of 27.20% and 24.06%, respectively.

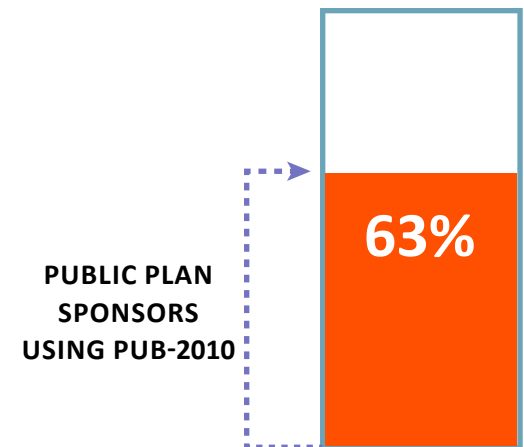
FUNDED RATIOS INCREASED DRAMATICALLY



66% of the pension plans analyzed exceed the 80% funded mark, compared to 34% in the 2021 report. Those plans below the 50% funded level fell to 10% this year, compared to 14% in the 2021 report.

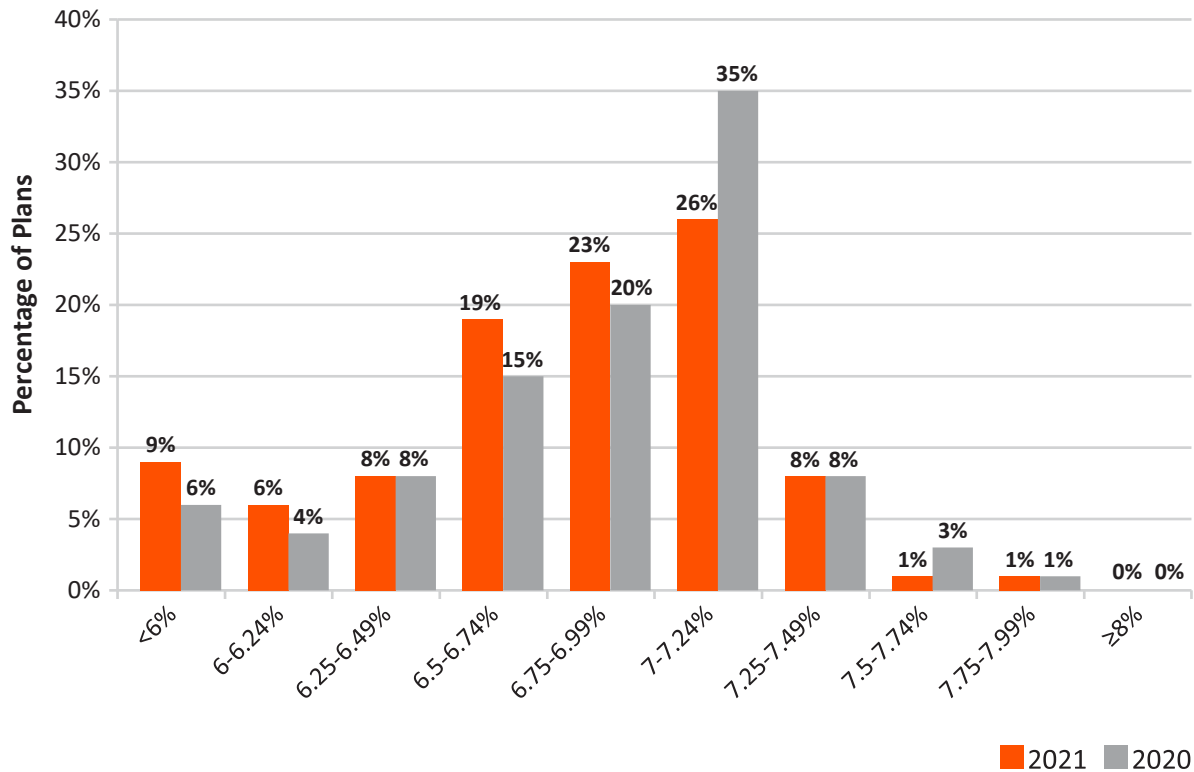
Notably, 26% of plans can boast pensions that are funded at 100% or higher, a huge shift when compared to 8% in last year's report.

THE VAST MAJORITY OF PUBLIC SECTOR PLANS NOW USE THE NEWEST MORTALITY TABLE



The Society of Actuaries (SOA) periodically publishes mortality studies reflecting updated life expectancies based on large databases of pensioner mortality experience. As of the June 30, 2021 CAFRs, 63% of Connecticut public plan sponsors were using the Pub-2010 public sector-specific mortality table, which represents a near doubling of the percentage of those using that table in our 2021 report.

LONG-TERM INVESTMENT RETURN ASSUMPTION (FYE 2021 VS. FYE 2020)



The average investment return assumption is 6.53% (median is 6.75%). This represents a decrease of 13 basis points from the 6.66% average (6.875% median) in our 2021 report.

This assumption is generally tied to either the July 1, 2020 or July 1, 2019 actuarial valuation used in determining the employer's cash contribution amount (also known as the Actuarially Determined Employer Contribution, or ADEC).

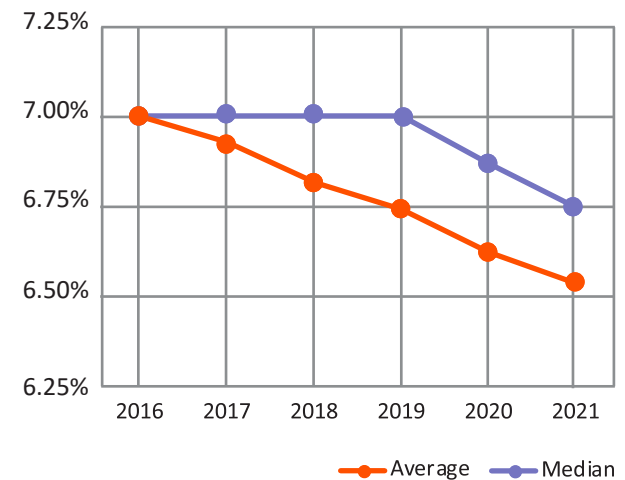
ADEC

What is ADEC?

Actuarially Determined Employer Contribution (ADEC): The amount actuarially calculated each year that is required to be contributed by an employer to a pension plan's pool of assets in order to ensure there will be enough funds to pay promised pension benefits.

AVERAGE AND MEDIAN INVESTMENT RETURN ASSUMPTION TRENDS

All else being equal, a lower investment return assumption results in higher actuarial liability and ADEC, and a lower funded ratio.

**Average and median investment return assumption**

When looking at trends, the average long-term rate of return assumption has declined by 61 basis points (from 7.14% to 6.53%) from FYE 2015 to 2021.

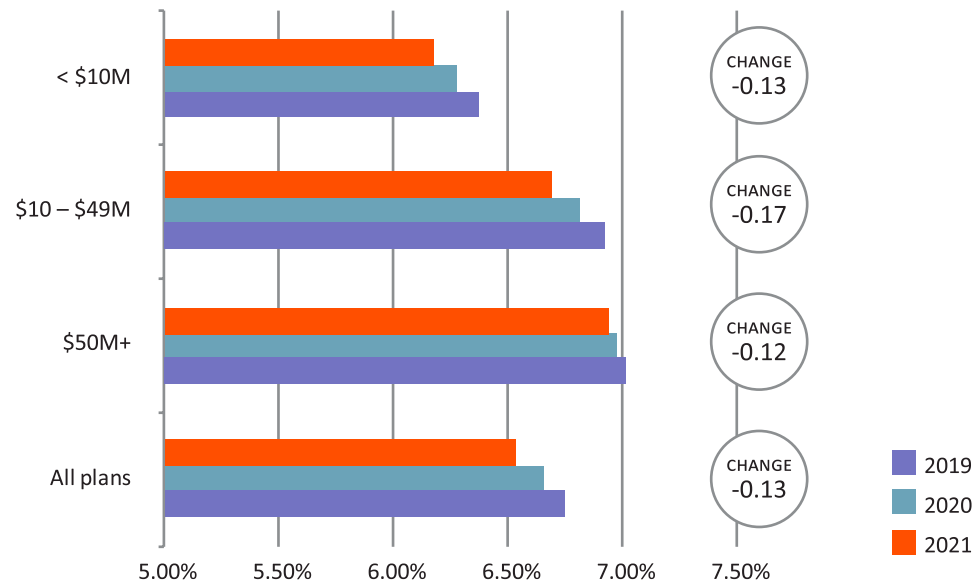
The median assumption declined 50 basis points (from 7.25% to 6.75%) during that same period.

Approximately 45% of plans reduced the long-term rate of return assumption from FYE 2020 to FYE 2021, with the most common reduction being 25 basis points.

AVERAGE INVESTMENT RETURN ASSUMPTION BY PLAN SIZE

Plan assets (\$ millions)	% of plans	Average Investment Return Assumption			
		2021	2020	2019	% Change
< \$10	36%	6.15%	6.28%	6.38%	-0.13%
\$10 – \$49	34%	6.64%	6.81%	6.89%	-0.17%
\$50+	30%	6.86%	6.98%	7.02%	-0.12%
All plans	100%	6.53%	6.66%	6.74%	-0.13%

We also analyzed the investment return assumption based on plan size by assets (under \$10 million, \$10 to \$49 million, \$50 million plus). The results show that as plan size increases, the average investment return assumption increases as well. Within each range, the average assumption decreased from 2020 to 2021, and the average decrease for all plans was 13 basis points (from 6.66% to 6.53%).

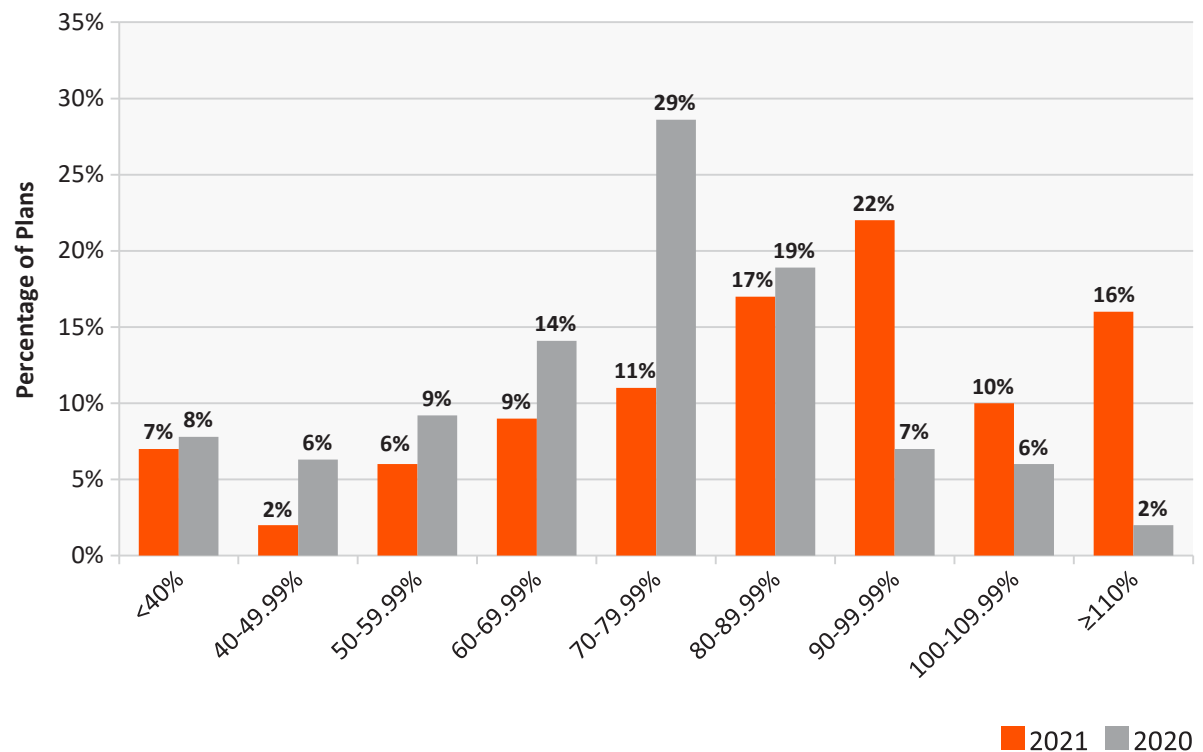


FUNDED RATIO

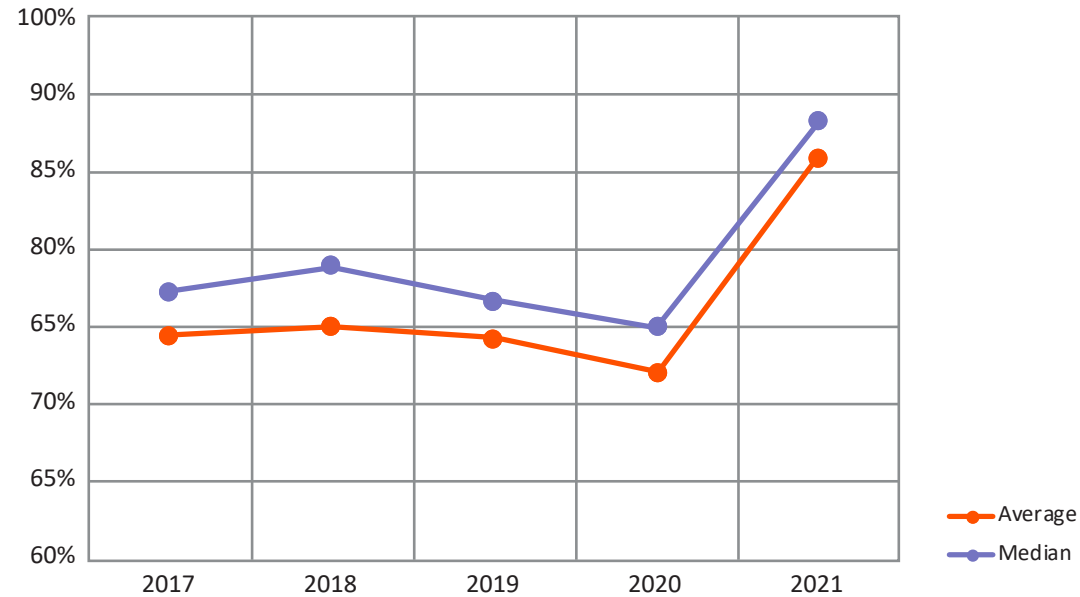
Largely driven by the very strong investment performance for FYE 2021, funded ratios for municipal pension plans are noticeably higher than they have been in the past several years.

This year, 66% of the pension plans analyzed exceed the 80% funded mark, compared to 34% in the 2021 report. Those plans below the 50% funded level fell to 9% this year, compared to 14% in the 2021 report.

These percentages are consistent with increases in the average and median funded ratios when compared with 34% of plans exceeding the 80% mark in our 2021 report. Notably, 26% of plans can boast pensions that are funded at 100% or higher, a huge shift when compared to 8% in last year's report.



AVERAGE AND MEDIAN FUNDED RATIO TRENDS



We analyzed the funded ratio (Market Value of Assets divided by Accrued Liability) for each plan. As of FYE 2021, the average funded ratio was 85.8% (median of 88.2%), a substantial increase versus an average of 72.2% (75.1% median) in our 2021 report.

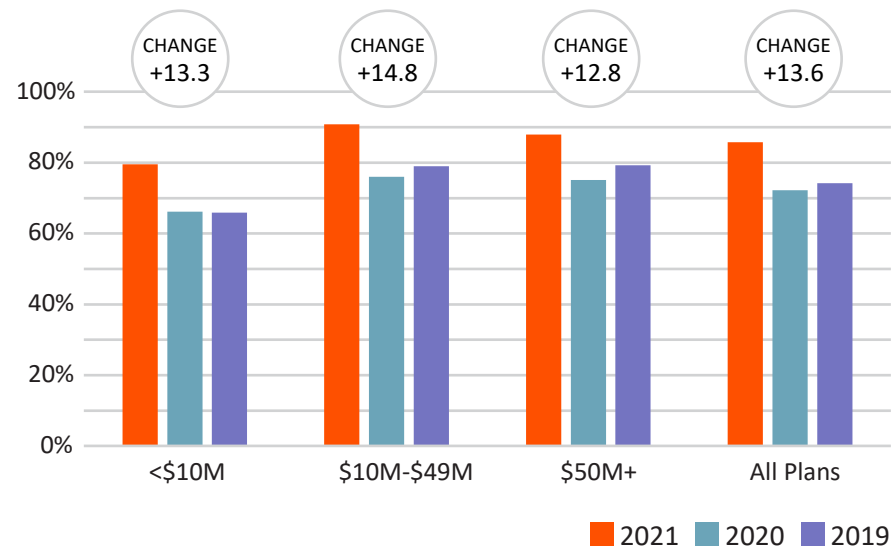
AVERAGE FUNDED RATIO BY PLAN SIZE

When looking at the average funded ratio based on plan size, the results show that as plan size increases, the average funded ratio tends to increase as well.

When looking at the average funded ratio based on plan size, the results show that as plan size increases, the average funded ratio tends to increase as well.

Again, the data shows that Connecticut municipal pension plans have increased funded ratios in the past year with a positive change in all plan size categories. In the 2021 report, the average funded ratio decreased on average between 2.0% and 4.2% for the smallest and largest plans. In this year's report, double-digit increases are evident across the board in all plan size categories.

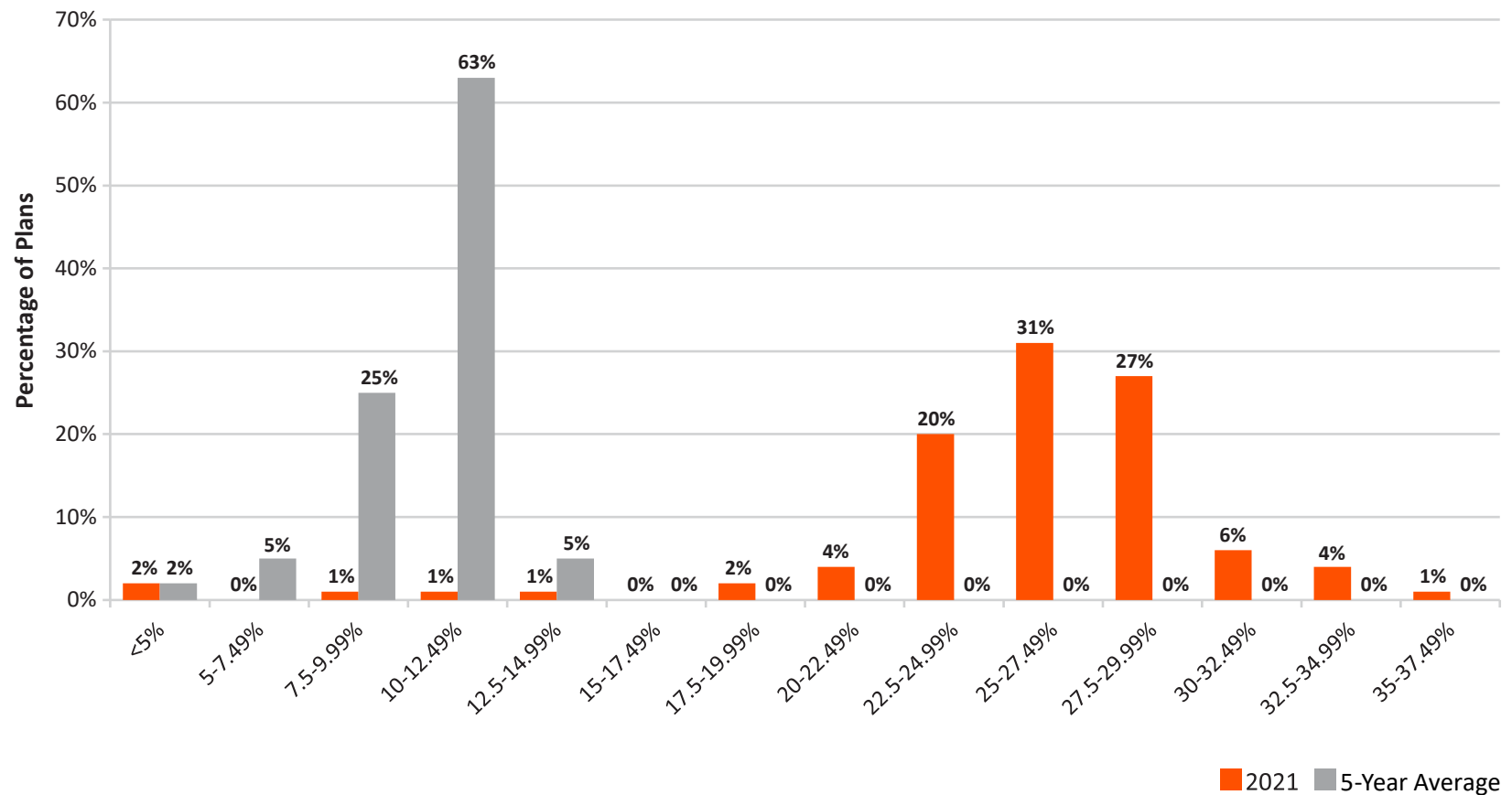
Plan assets (\$ millions)	% of plans	Average Funded Ratio			
		2021	2020	2019	% Change
< \$10	36%	79.5%	66.2%	65.9%	+13.3%
\$10 – \$49	34%	90.8%	76.0%	79.0%	+14.8%
\$50+	30%	87.9%	75.1%	79.3%	+12.8%
All plans	100%	85.8%	72.2%	74.2%	+13.6%



FYE 2021 RETURN VS. 5-YEAR AVERAGE RETURN

The average money-weighted rate of return for FYE 2021 was 25.76% (median of 26.21%). This rate was compared to the most recent 5-year compounded average money-weighted rate of return (10.17% average and 10.50% median).

Pension plan sponsors should be quite happy with Fiscal 2021 returns as they hit historical highs.



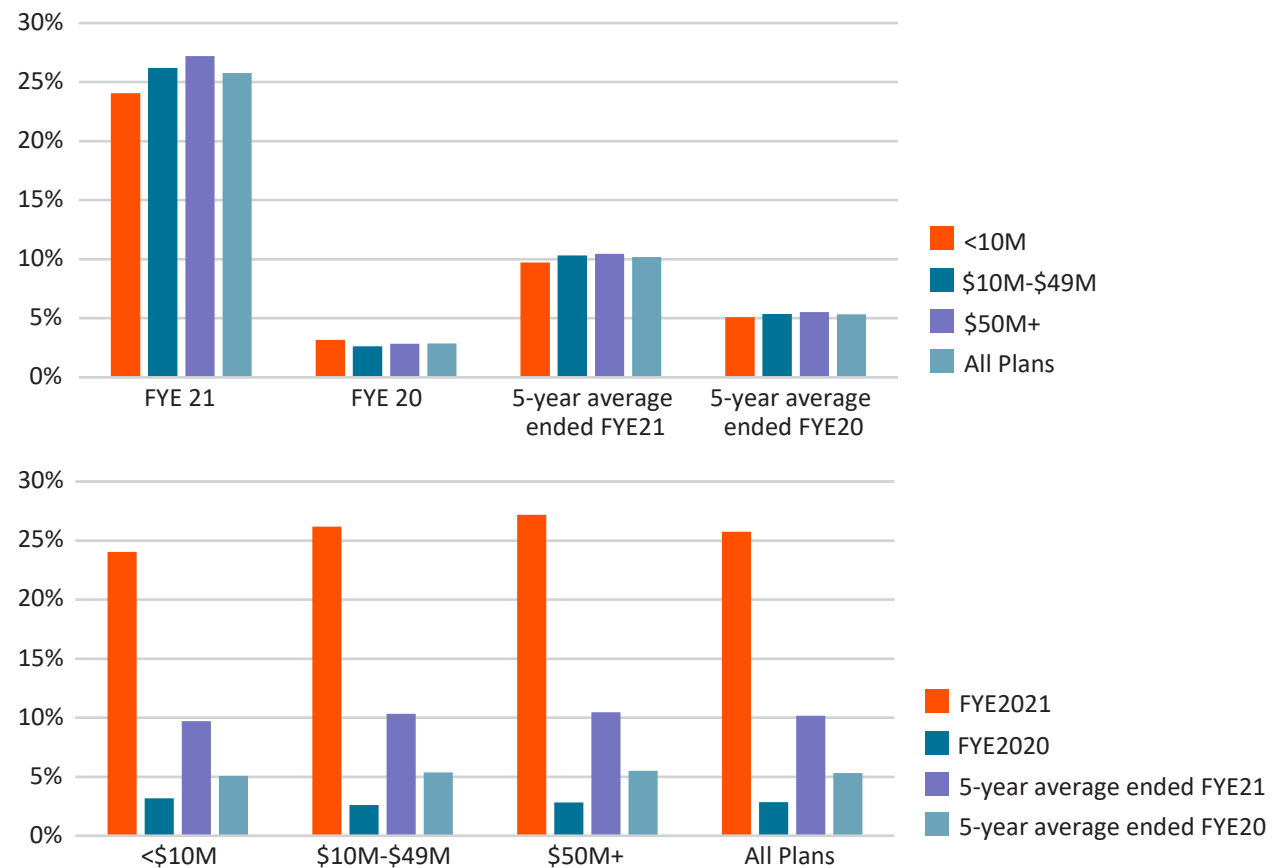
MONEY-WEIGHTED RATE OF RETURN BY PLAN SIZE

Our analysis of the money-weighted rate of return by plan size, both for FYE 2021 and for the equivalent 5-year period, revealed superior performance versus FYE 2020 in all plan size categories.

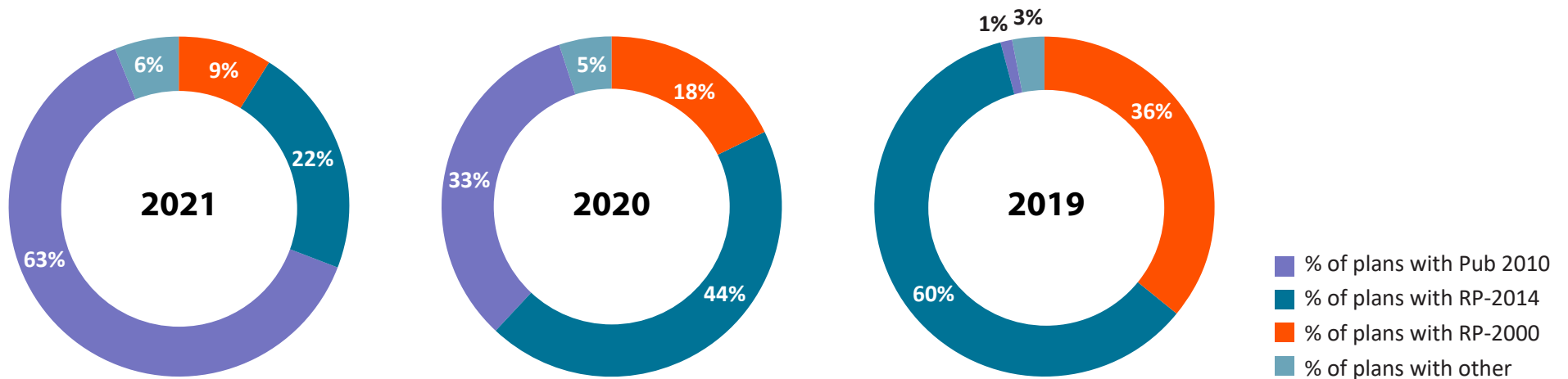
Consistent with the results of our analysis of the investment return assumption, we found that larger plans generally achieved a higher average money-weighted rate of return versus smaller plans.

However, unlike last year's report the FYE 2021 data reveals that largest plans (\$50M+) outperformed the smallest plans, with returns of 27.20% and 24.06%, respectively.

Plan assets (\$ millions)	FYE 21	FYE 20	5-year average ended FYE 21	5-year average ended FYE 20
< \$10	24.06%	3.17%	9.71%	5.09%
\$10 – \$49	26.20%	2.62%	10.33%	5.36%
\$50+	27.20%	2.82%	10.46%	5.52%
All plans	25.76%	2.87%	10.17%	5.32%



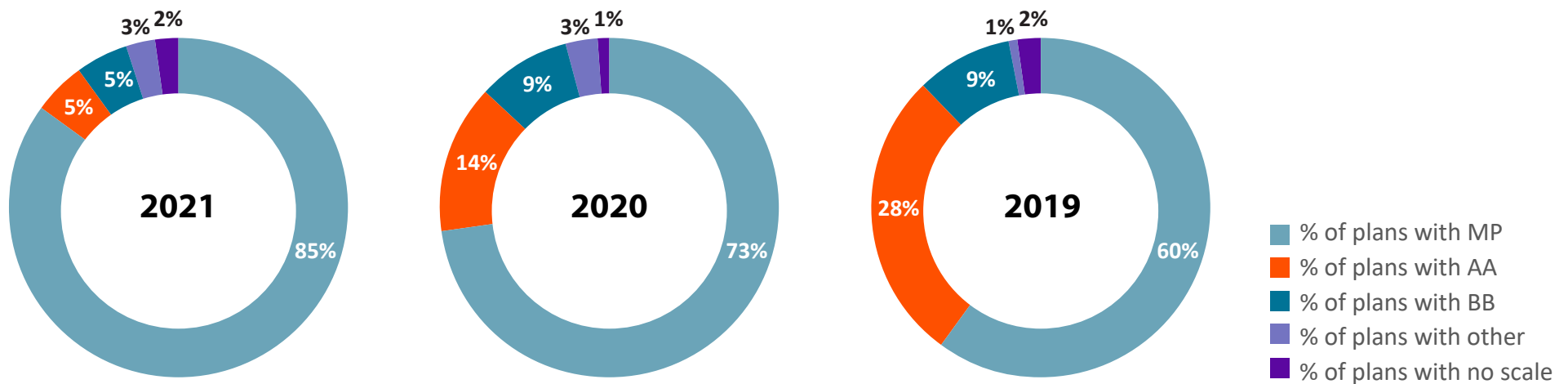
MORTALITY TABLE ASSUMPTION



The Society of Actuaries (SOA) periodically publishes mortality studies reflecting updated life expectancies based on large databases of pensioner mortality experience. As of the June 30, 2021 CAFRs, 63% of Connecticut public plan sponsors were using the Pub-2010 public sector-specific mortality table, which represents a near doubling of the percentage of those using that table in our 2021 report.

The next two most common mortality tables in use by Connecticut public pension plans were the RP-2014 Mortality Table (22%, down substantially from 44% in the 2021 report) and the RP-2000 table (9% vs 18% of plans last year). Only 6% of Connecticut plans were using an assumption reflecting another mortality basis, which is virtually unchanged from last year's report.

MORTALITY IMPROVEMENT SCALE ASSUMPTION

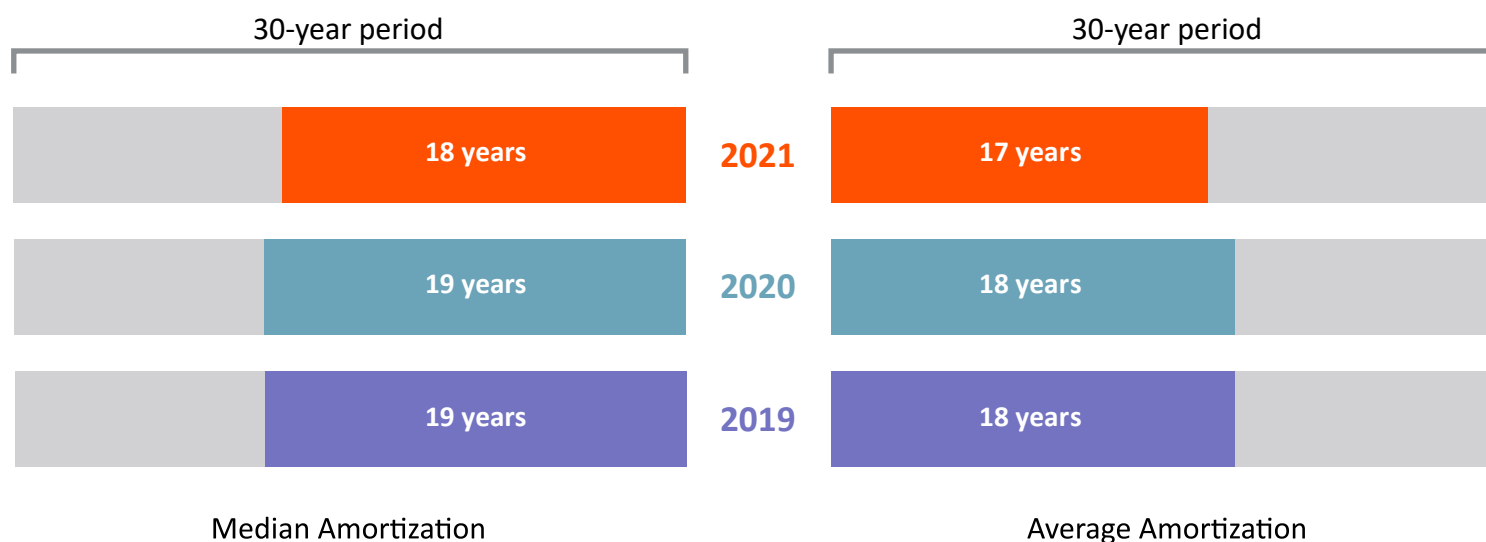


Because actuarial valuations involve calculating liability associated with providing benefits to participants, both today and for many years into the future, actuaries also consider the potential effect of future improvements in life expectancies. This effect is captured most often by way of a mortality improvement scale assumption, with the most common scale (85% of plans, versus 73% in our 2021 report) being Scale MP which is updated annually by the SOA.

The next most common scales, which are most often used in conjunction with the RP-2000 Mortality Table, are Scale AA (5% of plans, versus 14% in our 2021 report) and Scale BB (5% of plans, down from 9% last year). Only 5% of plans in the study are using some other approach for the mortality improvement scale assumption.

AMORTIZATION PERIOD

Connecticut's public pension plans compare favorably with the 30-year amortization period that is generally considered to be the maximum for public sector pension plans.



The ADEC most commonly reflects two components: 1) the normal cost, which is the value of benefits expected to be earned by active participants during the upcoming year, and 2) an amortization payment, which is a contribution towards eliminating the pension plan's unfunded actuarial liability (or surplus, if applicable) over time.

Since a pension plan's unfunded actuarial liability is generally considered a long-term expense, the amortization payment, similar to making a payment against a home mortgage, is recognized over time.

Connecticut public pension plans' amortization periods are reasonably consistent with national

and compare favorably with the 30-year period that is generally considered to be the maximum for public sector plans.

Both the average and median period for plans in the study have come down slightly when compared with the results of our 2021 report.

OPEB

MUNICIPAL OPEB DATA



KEY TAKEAWAYS

Municipalities with OPEB plans:

PERCENTAGE OF FUNDED OPEB PLANS REMAIN STEADY

55%

UNFUNDED

45%

FUNDED BY
OPEB TRUST

Fifty-five percent of OPEB plans are unfunded (unchanged from our 2021 study), with 45% of plans funded with an OPEB trust.

SIGNIFICANT INCREASE IN AVERAGE FUNDED RATIO

43.1%

For those plans funded using an OPEB trust, the average funded ratio is 43.1%, which is a 12.4% increase from an average funded ratio of 31.7% in our 2021 report.

HEALTH CARE TREND ASSUMPTIONS CONTINUE TO DECLINE

6.30%

INITIAL YEAR

4.41%

ULTIMATE

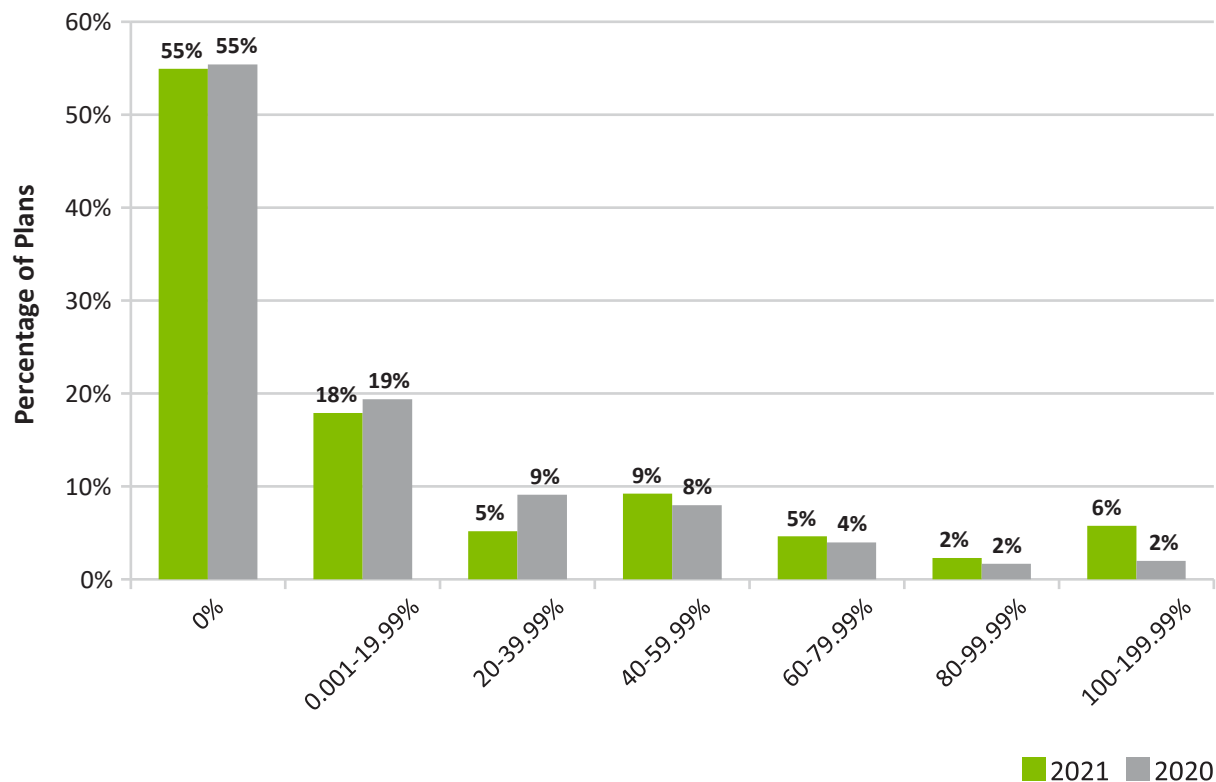
The average initial year health care trend assumption is 6.30% (median is 6.50%), and the average ultimate year health care assumption is 4.41% (median is 4.40%). These statistics compare with last year's average initial year health care trend assumption of 6.44% (median 6.50%), and an average ultimate year health care assumption of 4.57% (median is 4.60%).

NUMBER OF YEARS TO REACH THE ULTIMATE TREND ASSUMPTION INCREASES

10
years

The median number of years to reach the ultimate trend assumption is 10 years, which is an increase of three years from the median period of 7 years in our 2021 report.

FUNDED RATIO FOR ALL PLANS



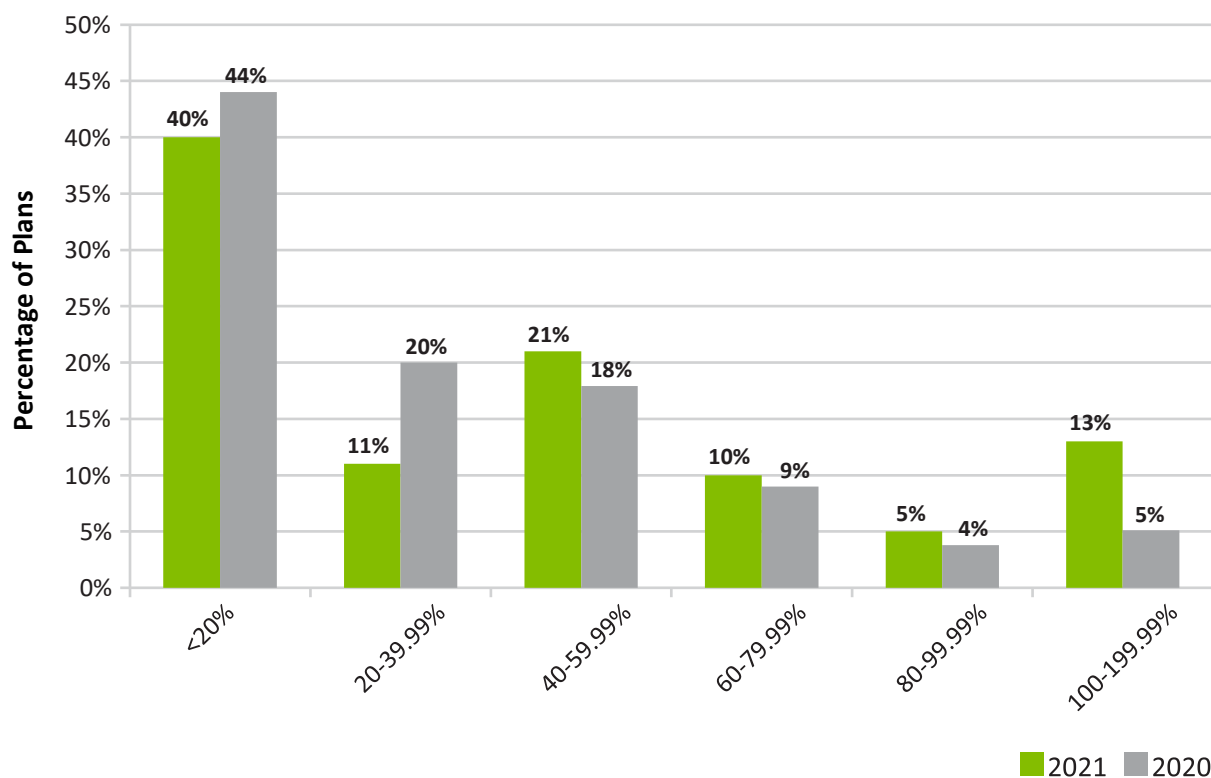
The rules governing how municipalities should report pension costs and other post-employment obligations are covered by the Government Accounting Standards Board (GASB). GASB is a private non-governmental organization that creates accounting reporting standards for state and local governments.

Many public sector OPEB plans continue to be unfunded arrangements, as GASB did not define actuarial measurements of the liabilities until 2009.

As of FYE 2021, approximately 55% of the OPEB plans in Connecticut are unfunded, with the remaining 45% of plans funded via an OPEB trust. These statistics remain unchanged from last year's report.

FUNDED RATIO FOR FUNDED PLANS ONLY

Significantly more plans are 100% funded (13%), compared to 5% of plans funded at 100% as of FYE 2020.

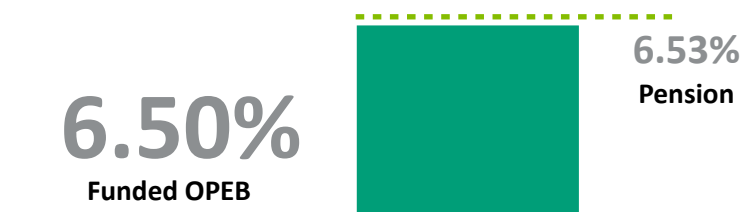


When looking only at the OPEB plans funded via a trust, the average funded ratio as of FYE 2021 is 43.1% (median of 34.7%), versus an average of 31.7% (median of 27.7%), in the 2020 CAFRs.

Forty percent of plans have a funded ratio of less than 20%, compared to 44% in our 2021 report.

Significantly more plans are 100% funded (13%), compared to 5% of plans funded at 100% as of FYE 2020. This increase was largely driven by the very strong investment returns for FYE 2021, combined with the continued funding policy contributions to these plans by municipalities.

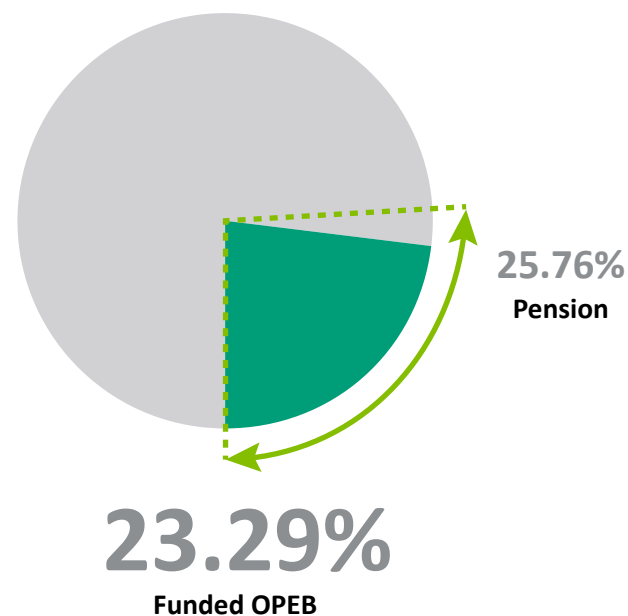
INVESTMENT RETURN ASSUMPTION



As of FYE 2021, the median investment return assumption for funded OPEB plans is 6.50%, unchanged from our 2021 report. This assumption is nearly identical to the average investment return assumption for pension plans at 6.53%.

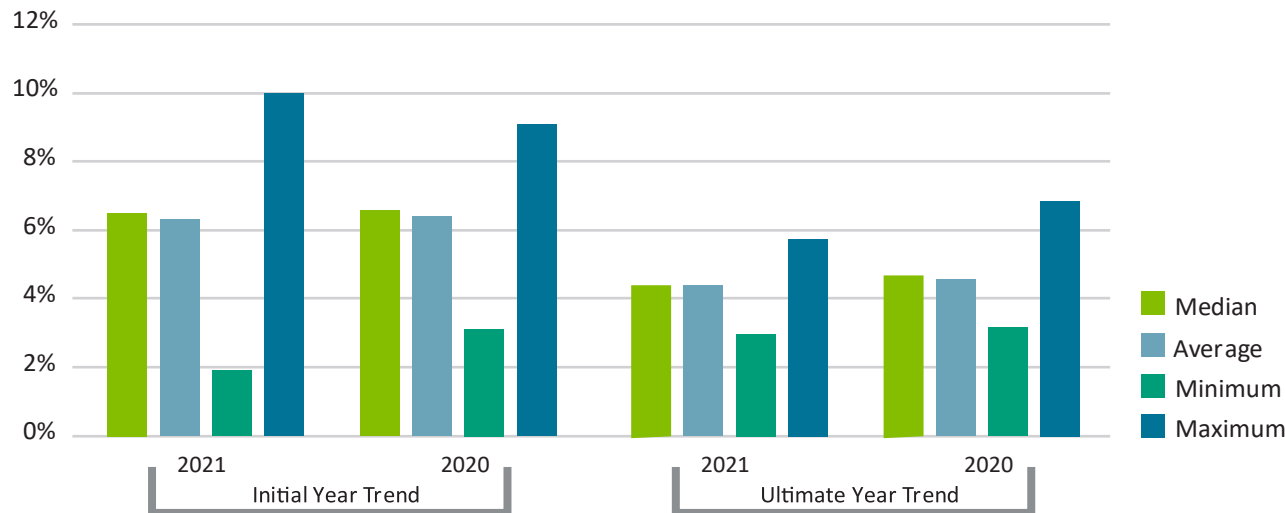
MONEY-WEIGHTED RATE OF RETURN

Similar to pension plans, the rate of return for OPEB plans jumped by leaps and bounds in FYE 2021.



The average money-weighted rate of return for FYE 2021 for funded OPEB plans is 23.29% (compared to 2.90% in the 2021 report). OPEB plans in 2021 returned less than pension plans (25.76%) when using a money-weighted rate of return.

HEALTH CARE COST TREND ASSUMPTION



The average health care cost trend assumption is 6.30% (median of 6.50%) for the initial year and is 4.41% (median 4.40%) for the ultimate year, with a median period of 10 years (average of 22 years) from the initial to the ultimate year.

There is a relatively large difference in the median and average number of years to the ultimate health care cost trend assumptions, due to a difference in the two most common approaches regarding this assumption. One approach generally assumes that the ultimate year is reached within 10 years or less, while the other approach (known as the "Getzen model") assumes that there is a much more gradual and longer period (typically 50 years or more) needed to reach the ultimate rate.

The average initial year health care trend assumption is 6.30% (median 6.50%), down slightly from an average of 6.44% (median 6.50%) in the 2021 report.

The average number of years to reach the ultimate trend assumption is 22 (up from 19 last year) with a median of 10 years (up from 7 last year).

	Initial Year Trend		Ultimate Year Trend		Years to Ultimate	
	2021	2020	2021	2020	2021	2020
Median	6.50%	6.50%	4.40%	4.60%	10	7
Average	6.30%	6.44%	4.41%	4.57%	22	19
Minimum	2.00%	3.00%	3.00%	3.00%	1	1
Maximum	10.00%	9.00%	5.75%	6.75%	78	78

EXPERIENCE MATTERS

Hooker & Holcombe has been providing municipalities with retirement plan solutions since 1956. Our actuarial consultants work side-by-side with cities and towns across the state and throughout the country to consult, design, and administer their pension and OPEB plans.



Whether we're guiding a municipality through the creation of a new plan, modernizing a plan to deliver online access for plan sponsors and participants, or terminating an existing plan, our years of hands-on experience have supported municipalities in helping their employees realize a secure retirement.

Connecting your organization to online pension data and resources has never been easier. Our Pension Administration Group offers plan sponsors and participants online access to pension data via PensionEdge, a robust web-based portal for plan administration, communication and reporting. Employees are also supported by knowledgeable H&H Service Center representatives who answer questions, and provide help with forms and website navigation.

Through our Retirement Services Group, we are able to provide clients with recordkeeping and TPA services for all types of employer-sponsored 401(k), 403(b) and other defined contribution plans. The group provides superior service for plan sponsors and participants, with easy access to online tools and resources that help them make informed decisions.

Our Investment Advisory Group delivers independent investment advisory consulting services for all types of employer-sponsored retirement plans. The team also provides investment and financial wellness education for employees, as well as committee fiduciary training sessions to help our clients better understand their fiduciary responsibilities and how they relate to their plans.

To learn more about our services, visit [hhconsultants.com](https://www.hhconsultants.com)