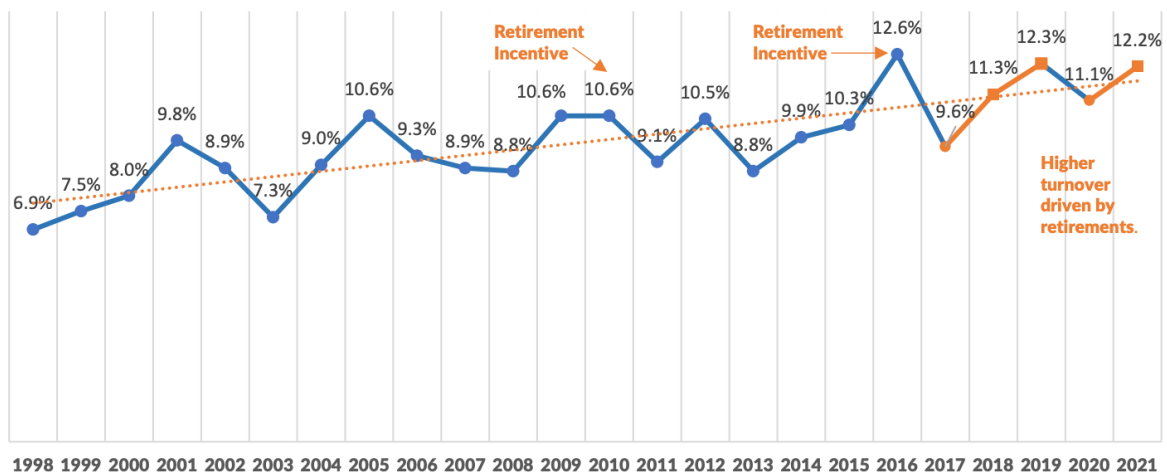


Forewarned is Forearmed
 April 19, 2022
 Written Testimony to
 House Committee on Ways and Means
 By David Coates and John Pelletier

We have been asked to testify today about adding to S. 286 (an act relating to amending various public pension and other postemployment benefits) language that would allow for all new employees – regardless of classified or exempt status – to have a choice between a defined contribution or defined benefit plan. We support this structural change to the retirement plan systems which would give retirement asset portability to the many employees who have no intention of working in the public sector for all or most of their working career. This change would also partially reduce the significant volatility of the required annual state contributions, as the employer, to these systems.

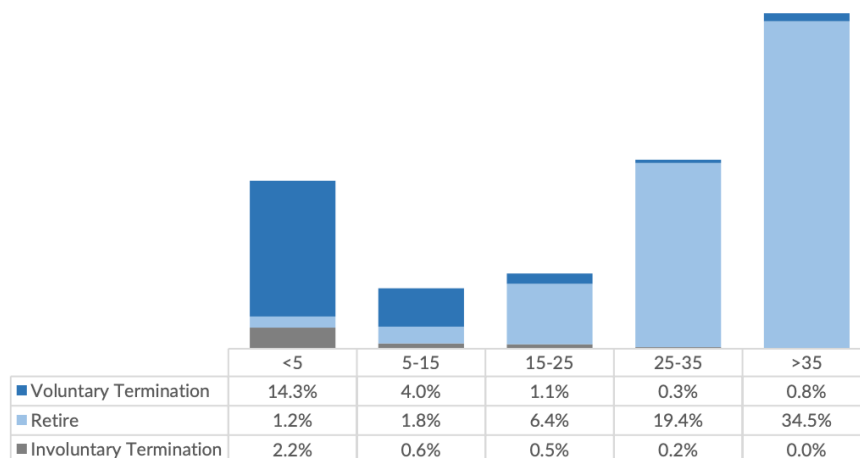
The Department for Human Resources [Workforce Report for Fiscal Year 2021](#) indicates that in 2021 the turnover rate was 11.9% for the total state employee workforce (classified and exempt employees). Only 4.2% of was due to retirement (35.3% of total turnover) and the rest, 7.7%, was caused by such things as voluntary and involuntary termination. It is clear that many leave government service each and every year and for some of these departing employees having a portable defined contribution plan would likely be a preferable benefit than a defined benefit plan. Offering such a new benefit choice could help recruit workers who are not planning on a public service career for 20 or more years. In addition, since 1998 the turnover rate for classified employees has increased by 77% (see chart below). This increase in turnover is not driven exclusively by retirements.

Table 29 Historical View of Turnover – Fiscal Years 1998 to 2021



The Workforce Report also indicates that state employees with 15 or less years of service make up more the 71% of the workforce and account for about 70% of the turnover. Those with less than 5 years of service make up 35% of the workforce and over half of the turnover. For many of these employees having a defined contribution option would be very beneficial.

Voluntary separation and length of service has an inverse relationship – the percent of voluntary separation goes down as length of service increases.



| Employees in this Years of Service Group... | <5 | 5-15 | 15-25 | 25-35 | >35 |
|---|-------|-------|-------|-------|-------|
| ...make up this % of the Workforce. | 35.2% | 35.9% | 19.6% | 7.6% | 1.6% |
| They account for this % of Total Turnover. | 51.0% | 18.7% | 12.9% | 12.5% | 4.9% |
| This % of them left State employment in FY 21 | 17.7% | 6.4% | 8.1% | 20.1% | 37.8% |

The goal of S. 286 is to fix the retirement systems for state workers and teachers. More specifically, the General Assembly wanted to reduce the level of volatility of the payments made by the state as part of its annual employer contribution to these pension plans. The proposed bill will not solve Vermont’s financial problems with regard to these retirement systems and does not reduce contribution volatility. While these recommendations are a good start, they do not include the systemic solutions needed to make the systems sustainable and much less volatile.

To be clear if you pass this bill as written, you will not permanently fix Vermont’s pension and retirement healthcare problems. Instead, you will be merely delaying an inevitable funding crisis until the next recession and/or bear market. When this occurs Vermont will likely be on its own—there is unlikely to be another pandemic sized infusion of cash from the federal government.

There is an old proverb “forewarned is forearmed.” This proverb means that **if you know what is coming, you can prepare for it.** We believe that many of the actuarial assumptions that are the basis of S. 286 are unrealistic, especially given recent economic events.

Before the end of this decade, Vermont is nearly guaranteed to experience a recession, a bear market and/or a high inflationary period. One or a combination of these events will likely create another plan funding crisis. You have been forewarned. If this bill is passed without additional

changes, Vermont will not be forearmed and the legislature will be faced again in the future with very painful budget choices.

Reduction in the Unfunded Liabilities. Many of the proposed changes in this bill are good. The systems' unfunded liabilities would be reduced by \$2 billion. Also, the retiree health care liabilities would be prefunded (amortized), something our state treasurer, Beth Pearce, has been encouraging for several years.

After carefully analyzing the impact of the recommendations—they come up short — likely far short. None of the recommendations include the structural changes needed to make the systems sustainable. Instead, they offer only temporary relief.

The \$2 billion reduction in unfunded liabilities reduces the pension liabilities by only \$300 million, just 10% of the current \$3 billion liability (as of June 30, 2021).

The other \$1.7 billion results from an accounting change. Prefunding the retiree health care benefits permits the use of a higher discount rate that then reduces the present value of the obligations to the systems. Prefunding merely changes the assumed discount rate from around 2.2% to 7%.

Bear in mind, no changes would be made to alter retiree health care benefits. These extraordinary benefits, not generally found in the private sector, remain unchanged. Based on actuary reports, the cost to Vermont from just one married couple's early retirement health care benefits from ages 55 to 65 could cost the state in excess of \$300,000. If we are like other states, these early retirement healthcare benefits are likely equal to half of the unfunded retirement healthcare liability.

To be clear 85% of the \$2 billion liability reduction is caused merely by an accounting change to a discount rate, while only 15% of this reduction is caused by tangible savings—payments into the plan to reduce unfunded liabilities, benefit reductions to employees or increased payments by employees and the employer into the system.

In fact, based on the data from JFO presentations to this committee, all of the annual savings from the employees due to benefit and employee cost changes (reductions in ADEC payments) are entirely used to offset by the increased costs of prefunding the retirement health care benefits. The taxpayer and the General Fund get no net savings from these changes.

Surprisingly, the bill created a brand new and potentially very expensive benefit for the teachers. Once the pension plan funding ratio meets or exceeds 80%, the COLA benefit changes (by formula) and will increase the current benefit of 50% of CPI to 100% of CPI. According to the JFO report, the present value of that benefit today is \$105 million. The full cost of this new benefit could be as high as \$300 million.

Unrealistic Assumptions:

Assumed Rate of Return Assumption

The actuarial assumptions for the Vermont systems include using a 7% rate of return and discount rate through 2038. By comparison, on November 16, 2021 the [Wall Street Journal](#) reported the following about the largest retirement system in the country, California Public Employees’ Retirement System (\$495 billion): *“Without changes, Calpers said its current asset mix would produce **20-year returns of 6.2%**, short of both the 7% target the fund started 2021 with and the 6.8% target implemented over the summer... Board members voted 7 to 4 in favor of borrowing and investing an amount equivalent to 5% of the fund’s value, or about \$25 billion, as part of an effort to hit the 6.8% target, which they voted not to change.”* The largest pension plan in the US predicts returns of 6.2% until 2042 but VPIC is predicting 7.0% returns until 2038? To reach a projected 6.8% return Calpers is issuing \$25 billion in debt to lever its portfolio. Do you really believe that Vermont’s small pension plans will outperform Calpers from now until 2038?

The following is a list of twelve plans covering state employees (including state police) and state teachers in New England and New York State. As you can see Vermont, despite having very small pension plans, anticipates better investment results than Calpers, Connecticut, Maine, New Hampshire and New York State—it this realistic?

| State Plan | Assumed Rate of Return |
|---|------------------------|
| Connecticut SERS | 6.90% |
| Connecticut Teachers | 6.90% |
| Maine State & Teachers | 6.50% |
| Massachusetts SERS | 7.00% |
| Massachusetts Teachers | 7.00% |
| New Hampshire Retirement System | 6.75% |
| New York State Teachers | 6.95% |
| New York State & Local ERS | 5.90% |
| New York State & Local Police & Fire | 5.90% |
| Rhode Island ERS | 7.00% |
| Vermont SERS | 7.00% |
| Vermont Teachers | 7.00% |
| Average Assumed Rate of Return | 6.73% |

Source: [NASRA as of March 2022](#)

If this assumed rate of return and discount rate assumption is too optimistic, then that means that the unfunded pension liability is currently understated. Based on the most recent actuary reports as of June 30, 2021, if the pension plan discount rate had to be decreased by 0.25%, 0.50% or 1.00% just the teachers’ and state employees’ pension plans unfunded liability would need to be increased by the following amounts:

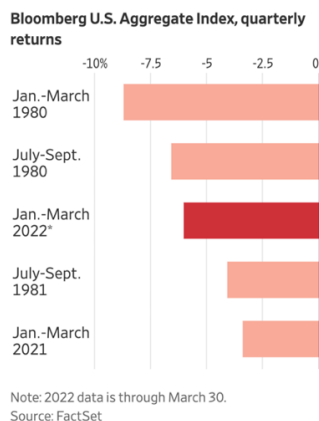
| Discount Rate Decrease | Increase in Net Pension Unfunded Liability |
|--------------------------------|--|
| 1.00% decrease to 6.00% | \$950 million |
| 0.50% decrease to 6.50% | \$475 million |
| 0.25% decrease to 6.75% | \$238 million |

If the assumed rate of return assumption is reduced to 6.75%, which is approximately the average of the 12 state plans in the chart above, then the unfunded liability of the plans would need to be increased by \$238 million. To put this into perspective, this one-time increase is equal to approximately 80% of the \$300 million reduction in the pension unfunded liabilities contemplated by this legislation. If Calpers, New York State, Maine and New Hampshire are using the correct assumed rate of return, then all or most of the benefit from this legislation to the unfunded pension liabilities will disappear.

Many market experts at the end of 2021 warned that US stock market prices were very high and subject to a correction or a crash in the near term. They also warned that the incredibly low interest rates created by the pandemic were likely to reverse soon, negatively impacting bond returns. This was all prior to Russia’s invasion of the Ukraine.

Famous bond investor Jeffrey Gundlach on April 12, 2022 predicted a market crash. [MarketWatch reported](#) that at a conference he stated that “A “calamity” may be coming for markets, potentially in 2023...The setup in the stock market is “very similar” to the one seen in the fourth quarter in 1999, he warned, in a reference to the lead-up to the bursting of the dot-com bubble.”

The [Wall Street Journal reported](#) on April 1, 2022 that “U.S. bonds’ worst quarter [ending March 2022] in more than 40 years has come to a close...The Bloomberg U.S. Aggregate bond index—largely U.S. Treasuries, highly rated corporate bonds and mortgage-backed securities—returned minus 6% in 2022 through Wednesday, on track for the biggest quarterly loss since 1980.”



Below are the year to date returns as of April 18th on the following major stock and bond indices:

| Index | Year to Date Return |
|--|---------------------|
| S&P 500 | -7.86% |
| NASDAQ | -14.78% |
| MSCI All World Country Index, ex USA | -7.93% |
| Bloomberg US Aggregate (fixed income) | -8.82% |

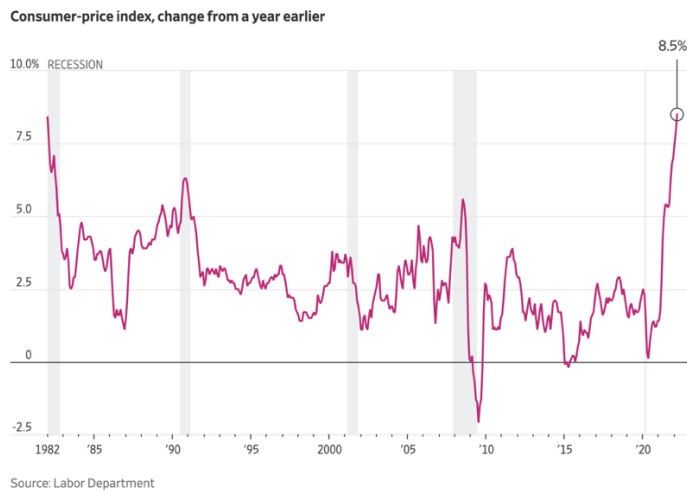
Other market experts are concerned a recession may be in our near future. As an April 10, 2022 [Wall Street Journal](#) headline indicated *Recession Risk Is Rising, Economists Say*. And one expert, Jeremy Grantham from GMO, the man who forewarned the world about the Technology Bubble and the Housing Bubble more than a year before either burst, had the following to say in his most recent [Viewpoints article](#) on April 6, 2022: *“In the West, historically, major spikes in the price of oil like today's have always preceded or triggered recession.”*

EXHIBIT 1: REAL PRICE OF WTI CRUDE OIL, IN 2022 \$



As of 3/31/2022 | Source: Global Financial Data, GMO

The following chart from an April 12, 2022 [Wall Street Journal article](#) shows that since 1982 the United States has always entered into a recession when inflation reaches levels such as those that we are currently experiencing:



Larry Summers, President Obama’s Treasury Secretary in a [Washington Post Opinion article](#) on April 5, 2022, had the following to say about the near term risk of a recession: *“There is a first time for everything, but over the past 75 years, every time inflation has exceeded 4 percent and unemployment has been below 5 percent, the U.S. economy has gone into recession within two years. Today, inflation is north of 6 percent and unemployment is south of 4 percent.”*

Steve Rattner, President Obama’s Car Czar who engineered the bailout of the auto industry during the Great Recession, raised similar concerns in his April 14, 2022, [New York Times opinion piece](#) entitled *We May Be on Track for a Recession Just as the 2024 Campaign Kicks Off.*

Inflation Pension Assumption

The inflation assumption used by the system is an annual inflation rate of 2.3 percent. We already know that assumption makes no sense. The [New York Times reported](#) on April 12, 2022 *“Consumer prices rose **8.5 percent** in the year through March, reaching the fastest inflation rate since 1981...Gas is not the entire story. Stripping out volatile fuel and food, so-called core prices climbed at a brisk 6.5 percent in the year through March...”* We have not seen inflation this high in 41 years.

Higher inflation will require the Federal Reserve to increase interest rates, perhaps dramatically over the next few years. This will negatively impact fixed income investing returns. For example, the Bloomberg US Aggregate fixed income index referenced above has an approximately 6.75 effective duration. This means that this Bloomberg index return is expected to drop by 6.75% for each 1% increase in interest rates. Bonds are poor investments in times of high inflation.

March 18, 2022 The Wall Street Journal, in an article entitled [The End of Zero: Prepare for a World With Higher Rates](#), noted: *“The low-rate environment that the world has become accustomed to has fundamentally altered how economies work. The companies that investors prefer putting their money into, the prices that people are willing to pay for houses and the spending choices that governments make have all been shaped by it.*

Consider: Even though the current yield on the benchmark 10-year Treasury yield—the backbone of long-term borrowing costs around the world—has risen to 2.19% [2.83% on April 18, 2022] from 1.37% over the past six months, that only brings it to around its average level over the past decade. If it were to move to the average of 4.6% it carried in the 2000s up to the start of the 2008-09 financial crisis, interest payments on many loans could more than double. In the latter half of the 1990s it averaged 6.1%—a level which was perceived as very low at the time but which now seems onerous.”

Yield on the 10-year Treasury note

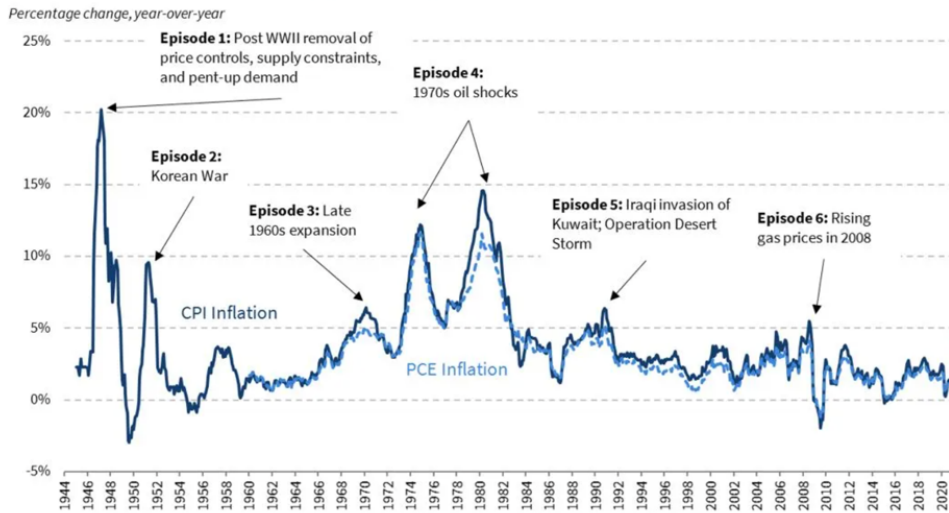


Source: Federal Reserve via St. Louis Fed

Wars, demand for goods (e.g., autos) in excess of supply (e.g., supply chain problems) and oil shocks all cause inflation. One or more of these three factors existed in every high inflationary period in the US since World War II. [Inflation was high during the following periods](#) (calendar year inflation of 4% or more): 1946 to 1947 (end of World War II, supply issue), 1951 (the Korean War, supply issue), 1968 to 1971 (the Vietnam War and US leaving the gold standard) and from 1973 to 1982 and 1984 (the Arab Israeli oil embargo followed by the Iranian oil crisis). Since 1984 there have only been 5 years with inflation greater than 4%: from 1988 to 1991 (Operation Desert Storm, Kuwait and Iraq oil shock) and 2021 (Covid supply shock).

In the 1970s, two shocks to energy markets led to the longest stretch of inflation in US history

Figure 1: Six episodes of post-WWII inflation



Source: Federal Reserve Economic Data (FRED), Haver Analytics, CEA Calculations.

Source: [Morning Brew](#)

What does all this data mean? The inflation assumption used by the system is too low for the current and future economic environment and the system is likely to generate very poor investment returns on the fixed income portions of their investment portfolio for as long as the Ukrainian oil shock and the Pandemic supply shocks continue. The current news out of China with regard to the Covid-19 is not encouraging with regard the risk of future supply shocks.

Another concern is whether high inflation is here to stay for a while. On March 2, 2022, the [Wall Street Journal](#) had an article entitled *Will Inflation Stay High for Decades? One Influential Economist Says Yes*. Shortly after the Pandemic commenced Charles Goodhart the former head of the UK central bank and a prominent economist issued a book entitled [The Great Demographic Reversal](#), that makes a compelling case for higher inflation over a prolonged period of time:

“When the global economy tanked in March 2020, the rate of inflation looked like it was heading to zero. That made it a surprising moment for former U.K. central banker Charles Goodhart to predict that inflation would hit between 5% and 10% in 2021—and stay high.

Mr. Goodhart reasoned that a seismic shift was under way in the world economy, one that fiscal stimulus and the post-pandemic recovery would only hasten. A long glut of inexpensive labor that had kept prices and wages down for decades, he said, was giving way to an era of worker shortages, and hence higher prices.

“The coronavirus pandemic will mark the dividing line between the deflationary forces of the last 30 to 40 years and the resurgent inflation of the next two decades,” said the 85-year-old

economist in an interview. He predicted that inflation in advanced economies will settle at 3% to 4% around the end of 2022 and remain at that level for decades, compared with about 1.5% in the decade before the pandemic.”

If he is correct, then the inflation assumption in the pension plans is very wrong and that will have large consequences on future spending by the state.

As Wall Street Journal [columnist James Mackintosh](#) explained on April 9, 2022, inflation often causes poor stock and bond returns to occur at the same time: “Not since the 1980s and 1990s—the last time the Fed focused on inflation at the expense of growth—have stocks generally fallen when yields have risen. Such a regime is tough on investors, since bonds don’t cushion a portfolio the way they have for the past three decades. Rather than gaining when stocks tank, bonds would lose money too. Inflation hurts.”

Stock returns can be positive when inflation is greater than 4.1%, but these returns tend to be much lower when compared to years when inflation is running at between 2.1% to 4.0%. The following chart shows rolling 12-month average total return (%) across headline CPI levels from 11/30/1979 to 9/30/2021 (source: [John Hancock Investment Management](#)):

| | Under 1.1% | From 1.1% to 2.0% | From 2.1% to 3.0% | From 3.1% to 4.0% | Over 4.1% |
|-----------------------------|----------------|-------------------|-------------------|-------------------|---------------|
| Russell 1000 Value Index | -8.13 ■ | 13.75 ■ | 17.56 ■ | 15.24 ■ | 9.67 ■ |
| Russell 1000 Growth Index | 0.38 | 16.18 ■ | 17.81 ■ | 12.88 ■ | 9.74 ■ |
| Russell Midcap Index | -5.86 ■ | 15.16 ■ | 18.86 ■ | 18.50 ■ | 9.86 ■ |
| Russell 2000 Index | -7.48 ■ | 12.67 ■ | 18.75 ■ | 16.02 ■ | 8.26 ■ |

COLA Assumption:

Underestimating cost of living adjustments for retirees will result in net losses to the pension plans and will increase the unfunded pension liability. This type of assumption error is common during a prolonged period of high and unexpected inflation. This just happened according to the June 30, 2021 Actuarial Valuation reports. CPI was expected to be 2.4% but was actually 4.6%--so the COLA amounts that were expected to be paid were very wrong—they were 92% higher than planned. *This one assumption being wrong in just one single year resulted in **an increase to the unfunded pension liability of \$58 million.*** This single year event is equal to 20% of the \$300 total reduction in the unfunded liability incorporated into S. 286.

From the State Employees' 2021 actuary report:

**Experience Gain/(Loss) Due to Changes in Experience Other than Investments
for Year Ended June 30, 2021**

| | |
|---|----------------------|
| Net turnover | \$3,446,914 |
| Retirement | -19,015,951 |
| Mortality | -4,440,365 |
| Disability retirements | -158,342 |
| Salary and service increases for continuing actives | -4,448,937 |
| COLA experience* | -35,588,639 |
| Miscellaneous | -3,195,329 |
| Total | -\$63,400,649 |

*COLA experience loss is due to actual 2022 COLAs being greater than expected (4.60% actual vs 2.40% expected for Group A, C, and D members, 2.30% actual vs 1.35% expected for Group F members who retired before July 1, 2008, and 4.60% actual vs 2.40% expected for Group F members who retired after July 1, 2008).

Vermont State Employees' Retirement System Actuarial Valuation and Review as of June 30, 2021



From the Teachers' 2021 actuary report:

**Experience Gain/(Loss) Due to Changes In Experience Other than Investments
for Year Ended June 30, 2021**

| | |
|---|----------------------|
| Net turnover | -\$10,518,767 |
| Retirement | -16,872,089 |
| Mortality | 1,761,346 |
| Disability retirements | -560,942 |
| Salary increases and service increases for continuing actives | 9,493,027 |
| COLA experience* | -22,593,555 |
| Miscellaneous | -6,407,934 |
| Total | -\$45,698,914 |

*COLA experience loss is due to actual 2022 COLAs being greater than expected (4.60% actual vs 2.40% expected for Group A members, 2.30% actual vs 1.35% expected for Group C members).

Vermont State Teachers' Retirement System Actuarial Valuation and Review as of June 30, 2021



JFO Inflation OPEB Assumption

The Joint Fiscal Office predicts that the OPEB annual budget increases will be 3% a year in the presentations that they have made to the legislature with regard to the Task Force recommendations and this bill. The assumption of a 3% annual health care cost increase is surprisingly low and very unlikely to happen.

According to a recent [CNBC article](#), employer health care insurance premium costs increased by 4% a year, on average, from 2011 to 2021. Given the current inflationary environment and the low deductible health plans held by state employees and teachers, this budgeted increase seems very unrealistic.

Salary Increases

At the end of March 2022, the average wage increase nationally was 5.6% over the last 12 months. Given discussion of inflation above this is hardly surprising. The actuary's assumption for wages is in the chart below for the system. These numbers look realistic with a 2.3% inflation assumption, but look very unrealistic given the current inflationary environment we

are experiencing. Wages and ultimately retirement benefits paid to future retirees are likely to be much greater than currently assumed by the system. For example, it is our understanding that next fiscal year state employee wages are expected to increase by 4.9%.

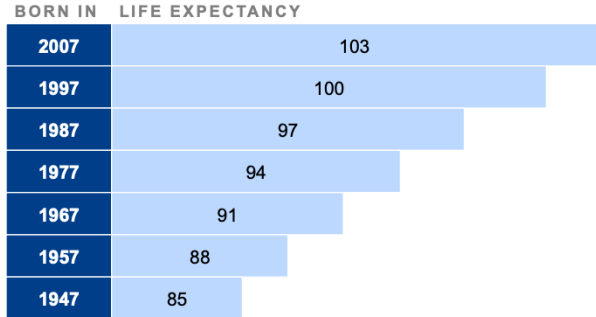
| Service | Annual Rate of Salary Increase (%) |
|---------|------------------------------------|
| 0 | 5.55% |
| 5 | 5.31% |
| 10 | 4.77% |
| 15 | 4.42% |
| 20 | 4.20% |
| 25 | 3.99% |
| 30 | 3.82% |
| 35 | 3.62% |
| 40+ | 3.40% |

Life Expectancy Assumption

Longevity risk is the risk that plan beneficiaries live a lot longer than we expect. Since the end of World War II, life expectancy has increased by two years each decade.

A World Economic Forum report titled “[We’ll Live to 100 — How Can We Afford It?](#)” notes that people born in the U.S. in 2007 have a life expectancy of 103 years for half of the children born that year. Vermont’s public pension and health care plans were originally designed for 10 to 20 years of retirement, not 20 to 45 years. Without changes, particularly for new employees, many individuals will collect retirement benefits for more years than they worked.

Figure 1: Longevity has been increasing steadily since the middle of the 20th century⁴



Source: www.100yearlife.com

Using the life expectancy chart above, the chart below shows the expected years in retirement in two employees retire at age 65 but have the following different birth years; 1957 and 1997 (the younger person will spend 52% more time in retirement than the older person):

| Born | Age in 2022 | Age at Retirement | Life Expectancy | Expected Years in Retirement |
|------|-------------|-------------------|-----------------|------------------------------|
| 1957 | 65 | 65 | 88 | 23 years |
| 1997 | 25 | 65 | 100 | 35 years |

To reach a meaningful, long-term solution, and to reduce the volatility of the annual state/employer contribution, the following should be part of the legislation.

1. More frequent review and adjustment of assumptions and rigorous stress testing.

The current version of the bill incorporating the task force recommendations extends the existing assumptions, established in 2019, to 2023. In our opinion, actuarial assumptions should be reviewed at least every three years, if not sooner, especially when adverse economic conditions occur, such as the recent increase in inflation. We must keep a closer watch on these assumptions to avoid or at least better manage surprises down the road.

We encourage annual pension stress testing as a means of monitoring the overall health of Vermont’s pension systems with key data on a timely basis that ties back to the budget. Already a practice in many jurisdictions, routine stress test analysis and reporting would provide plan sponsors and budget officials timely assessment of the health of Vermont’s pension systems. Sixteen states have a formal requirement in place either in legislation (13) or board policy (3). Additionally, in December 2020, the National Association of State Treasurers (NAST) approved a [resolution](#) supporting the practice.

This type of analysis is not new to the state – in 2019, the system’s actuary Segal Consulting provided a risk assessment of the plans containing useful insights. While pension stress test analyses can assess a range of downside economic scenarios, the recent uptick in inflation, and market volatility combined with stock prices approaching record levels highlight the need to understand the risk and impact of a negative asset shock. This analysis helps demonstrate the potential costs to systems if there is a significant correction in the financial markets and is a particularly timely addition to risk reporting given that stock valuations are close to historically high levels following the once in a generation returns in Fiscal Year 2021. The [following link](#) is to recommendations for what should be included in a regularly conducted stress test.

2. Alternative plans for new hires.

We must create different plan structures for newly hired state employees and teachers. Otherwise, the unfunded liabilities will continue growing at an unsustainable rate. This should entail implementing some form of defined contribution plans, or at least changing the defined benefit plans for new hires, such as increasing contributions, limits/exclusion of spousal coverage, and elimination of retiree health care and excluding coverage for early retirement.

3. Risk-sharing policy.

There is no provision in the task force’s recommendations to address unanticipated, significant downturns in the economy—which many are predicting by 2024. The unexpected is already

happening—the Pandemic, highest inflation in 40+ years and the Ukrainian war oil shock. These things are happening now and will likely occur again in the future.

The impact of these events currently falls entirely on the state (taxpayers). These unexpected costs should be equitably shared between the state and the systems. It's only fair and the right thing to do for all Vermonters.

Final thoughts: The task force efforts and this proposed legislation are appreciated, but more must be done to make the systems sustainable. That's exactly what Treasurer Pearce's 2021 recommendations for changing the systems were intended to achieve. One-time money and small plan changes won't cut it.

Given the scale of the challenge, providing benefits structured more in line with other Vermonters for future employees does not seem unreasonable, nor does asking the state workers' and teachers' unions to share a more equitable portion of the burden in solving this critical issue that continues to threaten the financial well-being of our state.

You have been forewarned but will the state of Vermont be forearmed for events we can all readily predict will have a high likelihood of occurring before the end of this decade?