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GRS PERSPECTIVES

Interest Rates Have Risen from Historic Lows. Does That Mean We Can Raise Our Assumed Rate of Return?

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After the Great Recession of 2008-2009, interest rates in the United States fell to historic lows – and stayed low for an extended period of time. Assumed rates of return for most public employee retirement systems (PERS) were lowered beginning after the Great Recession. Between mid-2022 and 2024, interest rates began to rise again, closer to historic norms.

Many PERS began to ask, "Does that mean assumed rates of return can go back up?" The answer is, "It depends."

In this article, we discuss increases in interest rates from historic lows, potential impacts on PERS' portfolio expectations, and policy issues surrounding changing the assumed rate of return.

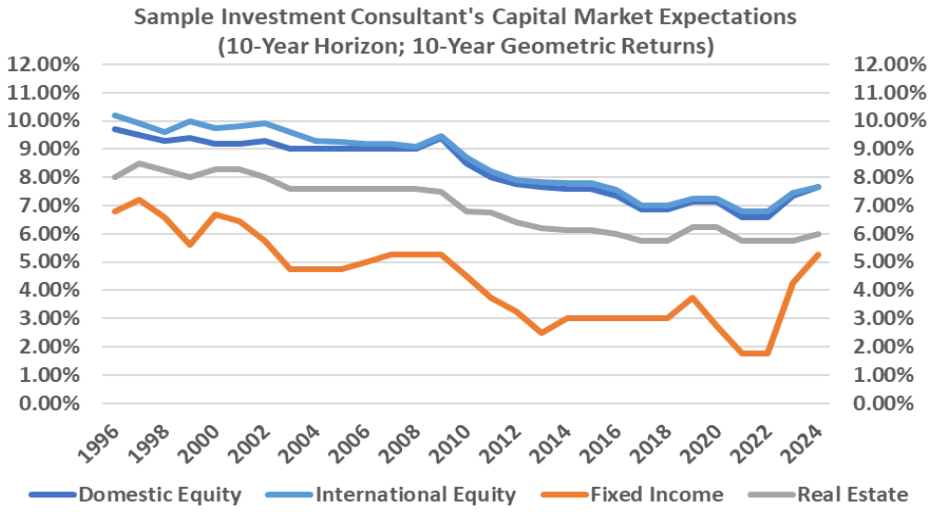
With regard to PERS, it is common practice that the assumed rate of return is utilized as the discount rate and is based on capital market expectations as well as the PERS' individual asset allocation and investment policy.

What has changed?

Roughly beginning with the Great Recession to 2021, interest rates decreased to historic lows before rising slightly during the subsequent one- to two-year time periods.

In addition, roughly beginning after the Great Recession and ending in 2022, capital market expectations have declined as shown in Chart 1 below.

Chart 1



Source: Sample data provided by one of the nationally recognized investment advisors participating in the GRS survey for the Capital Market Assumption Model.

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A portion of the decrease in capital market expectations was due to declining interest rates. Based on data from the St. Louis Federal Reserve Bank, fixed-income yields fell rapidly during the Great Recession and stayed persistently low until they began to rise in 2022.

Within the six-month to twelve-month period ending mid-2024, rates have more or less reverted to pre-Great Recession levels, as demonstrated in Chart 2 and Chart 3 below.

How much does this matter?

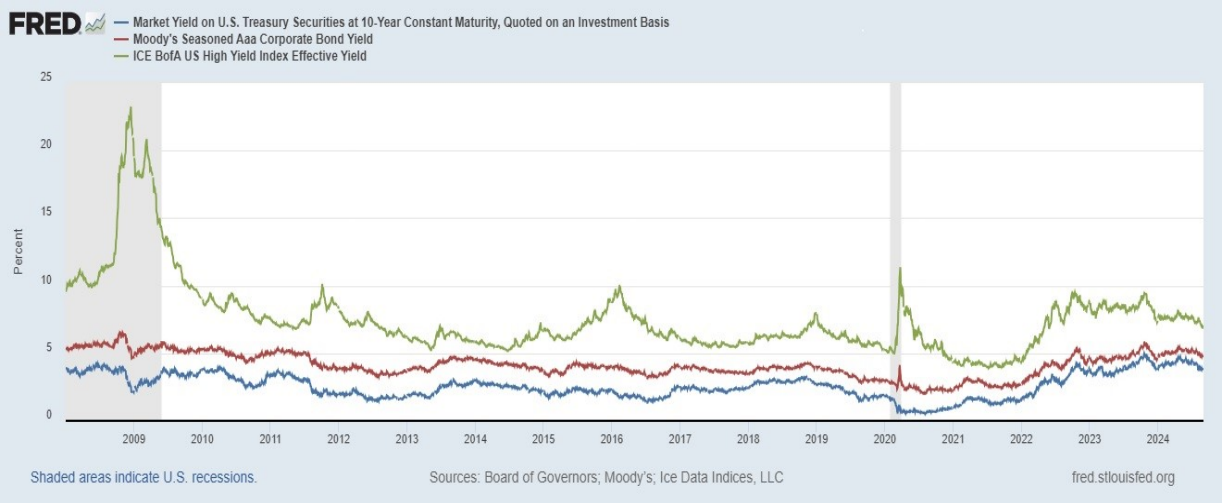
As shown in Chart 1 of capital market expectations (see page 1), lower return expectations occurred for most asset classes, not just fixed-income. Fixed-income return expectations fell more than other asset classes and appear to have recovered more between 2021 and 2023 as well. The short-term and long-term impact of rising interest rates for a particular plan may depend heavily on the asset allocation. The key consideration is how much exposure a plan has to bonds or other fixed-income securities.

Chart 2

History of Select Yield Rates			
	10-Year Treasury	Corporate – AAA	High Yield Bonds
1994-July 2024 Average*	3.85%	5.26%	8.48%
End of 2007	4.04%	5.41%	9.53%
Minimum since 2007	0.52%	2.01%	3.92%
July 31, 2024	4.09%	5.04%	7.30%

** High Yield Bonds data is only available since December 31, 1996.*

Chart 3



As illustrated in Chart 4, fixed-income asset allocations have decreased somewhat over the last couple decades for many PERS. According to the Public Plans Database[1], PERS had fixed income allocations between roughly 30%-33% from 2001 through 2010, decreasing to roughly 20%-25% from 2011 through 2023. The decrease in allocation to fixed income is less pronounced than the decrease in allocation to public equity over the same time period.

However, a lower allocation to fixed income today means that – all else equal – higher interest rates today will have less of an impact on expected returns than they would have in 2001 or even 2008.

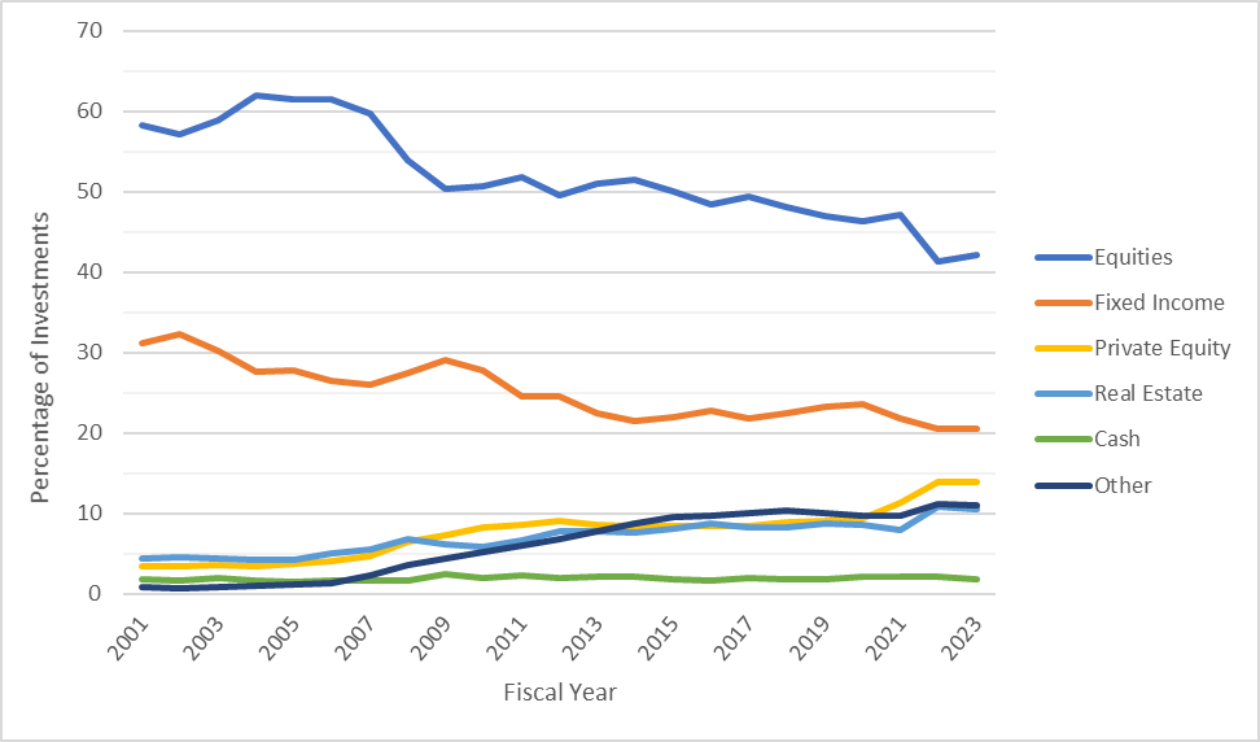
Moreover, since fixed-income allocations are a small portion of the total assets, if bond yields have risen say 1% and a plan holds 20% in bonds, would that mean the expected return should increase 0.2% (= 1% * 20%)?

The impact on the expected return would likely be a little less than that for two reasons.

First, the prior actuarial assumption may not have fully reflected the low interest rates in the past. Second, there is interaction between asset classes that dampens the impact of any singular asset class on the total portfolio return.

Chart 4

Asset Allocation for State and Local Pensions, 2001-2023



Note: The "Other" category includes commodities, hedge funds, miscellaneous alternatives, and other asset classes as defined by the Public Plans Database.

Source: Public Plans Database.

[1] https://publicplansdata.org/

What about other asset classes?

During the first half of 2024, equity valuations have been fairly high which suggests that future returns may be low. The average median expectation over the next 10 years from the investment advisors survey in the *GRS Capital Market Assumption Modeler for 2024*[2] is roughly 6.75% for U.S. and International Equities. For alternative asset classes, namely commodities and private infrastructure, the average expectation is slightly less at roughly 6.50%.

While there is variability in expected return by asset class, there is a common building block for the expected return on most alternative asset classes: *expected inflation*. The U.S. has experienced a sharp increase in inflation during 2021 and 2022. Questions about whether or not inflation can be brought under control still persist. That said, forward-looking inflation expectations are still quite low. The 10-year breakeven inflation rate (a forward-looking expectation based on the spread between 10-year Treasuries and Inflation Indexed Treasuries) peaked near 3% in April 2022, but has subsequently settled back down to the 2.00% to 2.50% range. Over longer horizons, the 20-year and 30-year breakeven inflation rates are similar. The inflation expectations suggest that – all other things equal – alternative asset classes will have similar expectations as prior years.

It is even possible that return expectations on other asset classes are lower than previous years, depending on the particular asset classes and period of time studied. If return expectations on any other asset class in the portfolio go down when bond yields go up, the net impact would likely be offsetting. From an actuarial perspective, all this suggests that the increase, if any, on the assumed rate of return for the plan as a whole will be small.

What about risk?

The trend to shift asset allocations towards alternative asset classes may have helped alleviate downward pressure on the assumed rate of return in recent years. However, the trend has also generally led to taking on higher investment risk. In some sense, there is no apparent penalty to taking on more investment risk. In fact, if the assumed rate of return goes up as more risk is taken, the measurement of the actuarial accrued liability will go down with the change. That does not mean that the investment risk is a free lunch.

Investment risk is often measured in standard deviation of annual returns. Twenty years ago, it may have been common for a plan to have a standard deviation of returns between 8%-12%. Today, as more money moves into riskier alternative asset classes, it is not uncommon to see standard deviations of returns between 12%-16%, an increase of 4%. How much does this increase matter? One answer to this question can be found by looking at common actuarial risk metrics for the plan.

Suppose that a plan has a ratio of assets to payroll of 10. A standard deviation increase of 4% would then equate to an increase in the standard deviation of market investment returns of 40% of payroll. That percent of payroll volatility will make its way into employer contributions over time. In fact, the volatility may be amplified since the unfunded actuarial accrued liability contribution (i.e., amortization payment) is leveraged relative to the asset base. Bear in mind that contribution volatility is managed with asset smoothing and amortization of gains and losses, but the underlying impact is clear. Moreover, many public plans have seen an increase in the ratio of assets to payroll over the last few years as plans mature – which would amplify the impact on contribution volatility.

Why change assumptions?

The actuary's view is that the assumed rate of return is based on capital market expectations and each plan's individual asset allocation and investment policy.

[2] GRS is a national actuarial and benefits consulting firm. It does not provide investment advice and does not develop or maintain its own capital market expectations. As a result, GRS requests and monitors forward-looking expectations developed by several major investment firms. The *GRS Capital Market Assumption Modeler* (CMAM) is the tool used to compile and monitor all of the forward-looking investment expectation information maintained. The CMAM is updated on an annual basis.

Generally, assumed rates of return are set equal to the discount rate for PERS. Once the assumption is set, the actuarial valuation determines the plan's funded status and employer contribution rate.

It is often tempting to view this process in reverse: Given a goal of lowering or maintaining contribution rate levels, what can be done to raise the assumed rate of return? From a plan funding perspective, this is generally bad policy.

First and foremost, changing asset allocation to support a higher rate of return often means taking on more investment risk and *investment risk tolerance decisions often do not consider the impact on increased contribution volatility and benefit security*. Second, a large majority of PERS are less than 100% funded which again supports the need for stable and strong contributions. Thirdly, there is a great deal of headline risk when turning the question around on the assumed rate of return in this way. In short, it looks like gaming the system.

Most PERS have decreased the assumed rate of return roughly 100 basis points since the Great Recession, but that does not mean those were easy decisions. It is generally much harder for a PERS to lower the assumed rate of return than raise it. In addition, many PERS are mature plans demographically, which may suggest a need for more fixed-income assets, not less.

Taking a broader view of the risk profile of a plan which includes demographic risk and plan maturity may support reducing investment risk as opposed to raising the assumed rate of return.

Conclusion

Interest rates have risen from their historic lows. This article offers public plan stakeholders some considerations about the potential impact of these increases on the assumed rate of investment return assumption used in actuarial valuations. In addition to actuarial assumptions, plan stakeholders must consider other factors such as the stability of plan contributions and the plan's risk characteristics. Increasing interest rates does not necessarily directly imply the assumed rate of return should be increased.

Managing a public employee retirement system is often similar to steering an oil tanker: even small changes take time and require thoughtful preparation. A change in assumptions based on one external event may be premature. Moreover, with the recent changes in asset allocations, bond yields may have a smaller impact on the assumed rate of return than in the past. Only time will show us how enduring these interest rate changes turn out to be.

On a side note: Beginning in 2023, pension plan valuations are required to include a Low-Default-Risk Obligation Measure (LDROM) due to a revision to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions.* The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is determined using market interest rates as opposed to the assumed rate of investment return. This measure is much more susceptible to changes in market interest rates. In the last year, LDROM discount rates have also risen perhaps by as much as 50 basis points. This may result in a decrease in LDROM by 5%-10%, depending on the plan. In this view, the rising interest rates improve the low-default-risk funded status under this measure. One way to view this is that the cost of derisking has come down.

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