

COMPREHENSIVE ACTUARIAL REVIEW OF THE
2019 ACTUARIAL VALUATION OF THE
TEACHERS' RETIREMENT SYSTEM OF LOUISIANA



ACTUARIAL SERVICES
PRESENTED TO THE PUBLIC RETIREMENT SYSTEMS' ACTUARIAL COMMITTEE
DECEMBER 18, 2019



LOUISIANA LEGISLATIVE AUDITOR
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December 2, 2019

Ms. Dana L. Vicknair, Director
Teachers' Retirement System of Louisiana
Post Office Box 94123
Baton Rouge, Louisiana 70804-9123

Re: Comprehensive Actuarial Review of the 2019 Actuarial Valuation

Dear Ms. Vicknair:

To fulfill the requirements of R.S. 11:127(C) to the Public Retirement Systems' Actuarial Committee (PRSAC) for 2019, the Louisiana Legislative Auditor (LLA) has conducted a Comprehensive Actuarial Review (CAR) for the Teachers' Retirement System of Louisiana (TRSL or System).

The remainder of this letter contains the results of our comprehensive review of your June 30, 2019 Actuarial Valuation (prepared by Foster & Foster and dated October 3, 2019). More specifically, we have evaluated the appropriateness and disclosures of certain actuarial assumptions and methods employed by the System and its actuary.

I would like to thank you and your staff for your cooperation and assistance with this review.

Sincerely,

Daryl G. Purpera, CPA, CFE
Legislative Auditor

DGP:LPG:JJR:ch

cc: Foster & Foster

LLA's CAR of TRSL 2019 Actuarial Valuation

TABLE OF CONTENTS

Section	Page
Scope of Review	1
Summary of Findings	2
Section 1 --Return Assumption and Discount Rate	3
Section 2 -- Inconsistency in Funding vs. Accounting	12
Section 3 -- Overly Optimistic Return Assumption	14
Section 4 -- Valuation Report Using Two Separate Discount Rates	19
Actuarial Certification	21
Appendix 1 – Discount Rate and Return Assumption Reductions Among Large Retirement Systems	
Appendix 2 – Quotes About Return Assumption Reductions from Other Retirement Systems	

Scope of Review

The 2019 Actuarial Valuation Report for the Teachers' Retirement System of Louisiana (TRSL or System) for funding purposes was prepared by the actuary for TRSL's retirement board, Foster & Foster, and dated October 3, 2019.

This Comprehensive Actuarial Review (CAR) of that report was prepared by Lowell Good, Actuary for the Louisiana Legislative Auditor and James J. Rizzo, Senior Consultant and Actuary employed by Gabriel, Roeder, Smith and Company (GRS). GRS is under contract with the Louisiana Legislative Auditor (LLA) to provide backup, research, calculations, actuarial services and advice to the LLA and his staff.

This CAR includes evaluations of appropriateness and disclosures of certain actuarial assumptions and methods employed in the valuation report as well as documented support for opinions presented herein.

However, a full actuarial valuation replicating the TRSL actuary's results was not performed; nor was a full actuarial valuation performed using recommended assumptions and methods.

Summary of Findings

The body of this Comprehensive Actuarial Review (CAR) focuses on issues of transparency, consistency and confusion surrounding the System's return assumption and discount rate. This is a departure from previous reports prepared by the LLA and submitted to the Public Retirement Systems' Actuarial Committee (PRSAC). Rather than preparing a full actuarial valuation of the System or a Comprehensive Actuarial Review report dedicated solely to supporting our opinions concerning the most appropriate actuarial assumptions and methods, we have prepared this CAR report concerning public disclosures of the return assumption and discount rate.

A summary of our findings follows, with details addressed in the remainder of this report.

- 1. Return Assumption and Discount Rate.** For several years, the TRSL board of trustees has adopted an *assumed rate of return* on assets that differs from the *discount rate*.
 - For the 2019 valuation, the expected return on the portfolio's assets is 7.95%, while the discount rate is 7.55%.
 - For the 2018 valuation, the expected return on the portfolio's assets was 8.05%, while the discount rate was 7.65%.

In the public domain, TRSL's 2018 discount rate (7.65%) has been conflated with its 2018 return assumption (8.05%). The same type of misstatement has been true about those two rates in other years as well. Two sources of confusion originate from: (a) TRSL publicly referring to their discount rate (the lower rate) as being their return assumption and (b) TRSL using a different return assumption for funding and accounting. This may cause some misunderstanding among various categories of interested parties. A 7.65% return assumption looks more reasonable to the general public than the true 8.05% return assumption. It is a transparency issue.

- 2. Inconsistency in Funding vs. Accounting.** For funding, TRSL recognizes the cost of future gain-sharing COLAs by reducing the return assumption by 40 basis points. For accounting, however, TRSL does not recognize future COLA benefits in its calculations.

This compounds the transparency issue and may cause confusion and misunderstanding.

- 3. Overly Optimistic Return Assumption.** Based on our research and analysis, in our opinion, TRSL's return assumption is overly optimistic for 2019. We have found this to be true for TRSL in each of the valuations in the past several years.
- 4. Valuation Report Using Two Separate Discount Rates.** Within TRSL's actuarial valuation reports, different discount rates are used for disclosures of the liabilities from what is used for the prospective year's contribution requirements.

This may be confusing to readers. Besides TRSL and the Louisiana State Employees' Retirement System (LASERS), this approach is not used by any other state or statewide retirement systems in Louisiana and, in our experience, is not mainstream actuarial practice among public sector retirement systems and their actuaries outside Louisiana. Consider the array of rates presented in Item X(1) on page 1 of TRSL's 2019 actuarial valuation report.

Section 1: Return Assumption and Discount Rate

For several years, there has been conflicting information in public disclosures as to what TRSL's investment return assumption is. Consider the documentation that follows.

The purpose of the following subsection is to establish that TRSL's true return assumption is 7.95% for 2019 and was 8.05% for 2018. A return assumption is the actuarial assumption of what the total portfolio is expected earn over time. In the TRSL valuation, there is an actuarial balance. This return assumption, together with expected employee and employer contributions is sufficient to actuarially finance all plan benefits – including gain-sharing COLAs, retirement benefits, death benefits, etc.

TRSL's Return Assumption

1. In TRSL's 2019 funding valuation report (page 55), the section on Actuarial Cost Methods and Assumptions indicates the return assumption for the June 30, 2019 valuation is 7.95%.

“Therefore, the gross expected return inherent in the valuation, which is the sum of the discount rate and investment return expected to be allocated to the experience account, is 7.95%.”

The term “gross” in this quote is added by the actuary to “expected return” to signify that the 7.95% is the expected (assumed) return before subtracting the 40 basis points for COLA benefits to obtain the discount rate. The 7.95% is expected on the total portfolio, before the adjustment for COLAs.

2. TRSL's Experience Study, dated March 1, 2018, in advance of its June 30, 2018 actuarial valuation, provides rationale for the then-current 8.05% return assumption and 7.65% related discount rate, which was scheduled to be the discount rate applicable to the 2018 actuarial valuation return assumption.

“Based on the Board's target asset allocation and 2018 capital market assumptions provided by Aon Hewitt, TRSL's Investment Consultant, and Hamilton Lane, TRSL's manager for alternative investments, the target portfolio produces an expected return of 8.47%. When excluding Aon Hewitt's additional expected return due to active management and lower investment expenses due to the plan's size, the expected return is 8.07%.” [page 3; underline for emphasis]

“Using TRSL's target portfolio allocation, Aon Hewitt's 30-year capital market assumptions for all but Private Equity Buyouts, and Hamilton Lane's assumption for Private Equity Buyouts, and the 2.50% inflation assumption, the long-term (30-year) expected return of the portfolio is 8.47%. Aon Hewitt includes 40 basis points as additional expected returns based on TRSL's underlying active managers along with consideration of lower fees achieved by TRSL through its large plan size. While we believe it is possible for active management to result in additional returns above that of passive management, we have adjusted Aon Hewitt/Hamilton Lane expected return to exclude the additional return expected due to active management and lower fees as a conservative measure. The resulting expected return is 8.07%.” [page 10; underline for emphasis]

“Therefore, our focus has been on the reasonableness of the current discount rate of 7.65% and the goal of 7.50% by June 30, 2021. These discount rates correspond to assumed rates of return of 8.05% for the June 30, 2019 valuation and 7.90% by June 30, 2021.” [page 10; underline added for emphasis, TRSL changed the ramp-down schedule to 7.95%]

3. During PRSAC meetings in recent years, the Legislative Auditor has asked TRSL’s actuary what the total investment return assumption was, for providing all plan benefits. The response has been 8.05%, 8.20%, etc.; not 7.65%, 7.70%, etc., depending on which year it was.
4. In correspondence dated September 28, 2018 (in response to the annual assumption/data request from the Actuary for the LLA), TRSL states:

“b. The rate of future investment return: 8.05% (7.65% discount rate plus 0.40% for gainsharing)”

5. In response to PRSAC’s request last year, TRSL’s actuary included all the relevant return assumptions and discount rates on page 1 of TRSL’s 2019 valuation report.

Among other disclosures, Item X(1) lists:

- 7.95% as the expected rate of return assumption in the June 30, 2019 column (for the current year);
- 8.05% in the June 30, 2018 column (the current year); and
- 8.20% in the June 30, 2017 column (for the current year).

Thus, it is established that for the 2019 valuation, the investment return assumption is 7.95%, as needed to finance all plan benefits, including gain-sharing COLAs, retirement benefits, disability and death benefits, etc. And for the 2018 valuation, the investment return assumption was 8.05%.

It is important to establish this because of the contradictions in the public domain.

TRSL’s Discount Rate

For several years, the TRSL board has adopted an *assumed or expected rate of return* on assets that differs from the *discount rate*. Following are the most recent three years.

Actuarial Valuation Date	Return Assumption	Discount Rate
June 30, 2019	7.95%	7.55%
June 30, 2018	8.05%	7.65%
June 30, 2017	8.20%	7.70%

The use of a separate discount rate from the return assumption is unusual for public retirement systems. With few exceptions, public retirement systems’ return assumptions are identical to their discount rate for funding, and no confusion or misunderstanding arises about that. In the vast majority of public retirement systems, the assumed rate of return is used to discount a plan’s projected future benefits to present values.

There is no statutory requirement for this two-rate approach known to us. *There is a simple fix to this, discussed later in this Section, which would result in TRSL’s return assumption and discount rate being the same, thereby avoiding confusion. This approach would also bring it in line with more common actuarial practice, in Louisiana and nationally, and do so without materially changing the unfunded liability or the employer contribution.*

In public discourse on public retirement systems generally, the *discount rate* is rarely mentioned, because the reference is almost always to the future *rates of return assumed* by retirement systems. A retirement system's assumption about the future investment returns expected from its portfolio (a) is what the general public understands and (b) is the most important actuarial assumption in actuarial valuations. The general public typically does not have the knowledge, nor should they, to understand that the two terms are not synonymous. To the general public, the two terms are frequently used interchangeably because the numbers are usually the same. However, for TRSL's public disclosure statements, this has been causing a lack of clarity in our opinion.

For TRSL, the reason two separate numbers for the return assumption and discount rate arise is because of the particular *actuarial method* chosen by the board of trustees and its actuary to reflect the cost of future gain-sharing cost-of-living-adjustments (COLAs). That method is not required; but is their choice.

Few large public retirement systems provide one-sided gain-sharing COLA benefits like we see in Louisiana. Some have moved away from that approach to a more direct COLA in order to preserve purchasing power (one that is not a one-sided gain-sharing approach). Refer to the report and presentation by the Actuary for the LLA at the September 26, 2017, meeting of PRSAC concerning *Post-Retirement Benefit Increases for Large Public Retirement Systems*.

We commend the board of trustees and its actuary for the advance-recognition of future gain-sharing COLAs in its funding valuation. However, this particular *actuarial method* of measuring future COLAs may cause unnecessary confusion and misunderstanding.

The investment return expected by TRSL for the fund's total portfolio is 7.95% (or 8.05% last year). This expected return, together with employer and employee contributions, is expected by TRSL and its actuary to actuarially finance all plan benefits promised by the retirement plan, i.e., all future expected gain-sharing COLA benefits and all future expected benefits for retirement, disability, death, etc.

TRSL expects the gain-sharing COLA benefit will cost an average of 40 basis points (0.40%) on plan assets each year. TRSL reduces the 7.95% total return assumption by 0.40% to cover the cost of future COLAs which equals the 7.55% discount rate. This 7.55% is then used to measure present values of *all other* plan benefits (i.e., retirement, disability, death, etc.), separately treating the gain-sharing COLAs benefits as financed with the 40 basis points each year. Refer to the reconciliation chart below.

Reconciliation of the Discount Rate and the Rate of Return Assumption for TRSL

Component Assumptions	From the 2019 Actuarial Valuation		Comments Regarding the Component Assumptions
	Current Year	Next Year	
Discount Rate	7.55%	7.50%	The discount rate is set by the board (in accordance with the ramp-down schedule adopted in 2016 and amended in 2018), independent of, and prior to, determining an assumed investment return.
Gain-sharing Transfers	0.40%	0.40%	The estimated employer cost for gain-sharing transfers was reported in the June 30, 2019 valuation as 40 basis points. That rate was determined based on 2016 forecasts.
Total Return Assumption	7.95%	7.90%	The board arrives at the total return assumption by adding the 40 basis points to the pre-determined rate of 7.55%.

A few observations are given below.

- a. The particular *actuarial method* of recognizing future COLAs together with the board's process for setting its discount rate and, therefore, its return assumption, may create confusion and a lack of transparency.
- b. This particular *actuarial method* and the System's disclosures produce rates that are not comparable with rates for other retirement systems in public databases and various publications.
- c. This method of reducing the return assumption by some number of basis points to approximate the cost of future COLAs is an "implicit" approach. Even though it is technically permitted in the Actuarial Standards of Practice (ASOPs), generally speaking, implicit approaches to assumption-setting are not favored by most actuaries). Refer to the subsection below on Implicit Subsidies.

While this particular *actuarial method* (reduction of return assumption) is technically reasonable, we recommend employing a different *actuarial method* for the advance-recognition of the System's gain-sharing benefits – one that is more transparent and less likely to cause confusion. More details on two alternative *actuarial methods* available for recognizing future gain-sharing COLAs can be found in the subsection below on Gain-sharing Recognition Methods.

Misinformation

This transparency issue goes further than merely confusing actuarial terminology. Incorrect information about TRSL's investment return assumption has been disseminated to the general public and in official documents. The effect of this is (a) it makes the System's return assumption appear lower than it is, and more in line with other large systems when it is not, and (b) it is unnecessarily confusing to the general public.

Directly from TRSL's Website and Staff

In addition to misstatements concerning TRSL's return assumption by research and advocacy groups and in the press, TRSL's press releases and its own website have contributed to the misunderstanding.

TRSL's Press Releases

According to TRSL's website, in recent years when TRSL's investment performance was favorable, press releases were issued to announce the return and how it exceeded their "expected rate of return."

However, TRSL's press releases compare the performance of the total fund to the discount rate, which is an apples-to-oranges comparison. In addition, the press releases refer to the discount rate as being the "expected rate of return" (i.e., the return assumption), which adds to the confusion.

Following are the press releases issued by TRSL concerning investment performance for 2018, 2017, and 2015; no press releases were found in the website for the 2019 and 2016.

2019 – No press release issued (according to the actuarial valuation report, the market value investment yield on total assets was 5.86%, while the actuarial investment yield on smoothed actuarial value of assets was 7.48%).

2018 – “*The System’s actuarial rate of return for FY 2018 was 9.48%, exceeding its assumed rate of 7.70%” [October 8, 2018; underline added for emphasis]¹*

2017 – “*TRSL’s actuarial rate of return for FY 2017 is 9.15%, exceeding its assumed rate of 7.70%.” [October 6, 2017; underline added for emphasis]²*

2016 – No press release issued (according to the actuarial valuation report, the market value investment yield on total assets was 1.02%, while the actuarial investment yield on smoothed actuarial value of assets was 6.67%).

2015 – “*TRSL’s actuarial rate of return for FY 2015 is 11.26 %, exceeding its assumed rate of 7.75%.” [October 5, 2015; underline added for emphasis]³*

The Key – TRSL’s Membership Newsletter

The November 2017 edition of “The Key” membership newsletter⁴ states:

“*TRSL’s actuarial rate of return for FY 2017 is 9.15%, exceeding its assumed rate of 7.70%.” [underline added for emphasis]*

These public disclosures, issued directly by TRSL, refer to the discount rate as being the assumed or expected rate of return. This may cause confusion and a lack of transparency originating directly from TRSL.

A simple and approximately cost-neutral solution would be to employ an alternative *actuarial method* for recognizing future gain-sharing COLAs. If TRSL were to change its *actuarial method*, it would avoid significant misinformation in TRSL’s public disclosures.

In TRSL’s CAFR

TRSL’s own Comprehensive Annual Financial Statement (CAFR) for the year ending June 30, 2018, states the assumed long-term expected rate of investment return as of valuation dates June 30, 2018, and 2017.⁵

Investment rate of return 7.65% and 7.70% respectively net of investment expenses. [page 38]

The System issues its own official CAFR. The State of Louisiana and local school districts also issue an official CAFRs. This information from the System’s CAFR finds its way in the CAFRs of the state and all participating employers.

More on this mismatch of return assumption in the funding of the System and in the accounting for the System is found in Section 2 below.

By Research and Advocacy Groups

An effect of this misinformation and confusion is that TRSL’s return assumptions and discount rates have been conflated in the publications of various research and advocacy groups.

¹ <https://www.trsl.org/news/trsl-adds-11-billion-in-assets-drop-interest-announced>

² <https://www.trsl.org/news/trsl-adds-nearly-1-billion-in-assets-drop-interest-announced>

³ <https://www.trsl.org/news/report-teacher-retirement-system-adds-14-billion-in-assets>

⁴ https://fluxconsole.com/files/item/202/56246/KEY_Nov2017.pdf

⁵ https://fluxconsole.com/files/item/202/38416/CAFR_2018_web.pdf

NASRA Survey Results

NASRA (National Association of State Retirement Administrators) publishes a commonly-quoted survey of public retirement systems. There have been two recent papers published on return assumptions: One published in February 2019, *Public Pension Plan Investment Return Assumptions*,⁶ and another in October 2019, *Latest Investment Return Assumptions*.⁷

The titles of these two publications as well as the headings and body of the papers indicate that they are reporting on the “investment return assumptions,” not the discount rates. Yet, both papers present TRSL’s investment return assumption as 7.65%.

For the vast majority of public retirement systems, the two rates are the same; so NASRA has not focused on the differences in TRSL’s valuations. To NASRA’s credit, a footnote to the table (for those who wish to explore the details more) states: “*The investment return assumption differs from the discount rate because of the effective cost of providing potential future ad hoc postretirement benefit increases, or gain-sharing. The investment return assumption, which includes gain-sharing, is reducing incrementally to 7.90% by 2021.*”

Nevertheless, to readers, it appears that the two systems used a 7.65% return assumption for their 2018 valuations.

As a result, some may believe that TRSL’s investment return assumption is in line with other state and statewide systems. However, TRSL’s return assumption was not 7.65% last year, and it is not 7.55% this year. It was 8.05% last year and 7.95% in 2019. TRSL’s true return assumptions (8.05% and 7.95%), as established for the record near the beginning of this Section 1, tell a very different story about whether they are in line with other systems.

Reason Foundation

A paper titled *Teacher’s Retirement System of Louisiana Solvency Analysis (Preliminary Draft – June 18, 2019)*,⁸ states:

“*TRSL’s assumed rate of return has decreased from 8.25% to 7.65% over the past two decades*”
[underline added for emphasis]

A Commentary article, *Slight Improvement, But Same Story: Louisiana Teachers’ Pensions Are Still in Trouble*⁹ (November 20, 2019), states:

The 2019 data included in the latest TRSL valuation reinforces that trend. TRSL assets returned just 5.86 percent over the past year, well below TRSL’s own 7.55 percent return assumption. . .

This is a testament to how TRSL’s assumed rate of return, which was recently lowered from 7.65 percent to 7.55 percent, is still too optimistic. TRSL’s 7.55 percent is well above the national median assumed rate of return of 7.25 percent. In fact, recent returns and economic forecasts suggest that a lower investment return environment is likely to be the “new normal”, anchored by slow economic growth, low inflation, overpriced capital markets, and low interest rates. [underline added for emphasis]

⁶ <https://www.nasra.org/files/Issue%20Briefs/NASRAInvReturnAssumptBrief.pdf>

⁷ <https://www.nasra.org/latestreturnassumptions>

⁸ <https://reason.org/wp-content/uploads/louisiana-trsl-pension-solvency-analysis.pdf>

⁹ <https://reason.org/commentary/slight-improvement-but-same-story-louisiana-teachers-pensions-are-still-in-trouble/>

In the Press

In addition to examples of misinformation of TRSL's return assumption in research and advocacy groups (above), similar examples appear in the press.

Pensions & Investments

Pensions & Investments has a large readership for print and digital publications. Consider the article¹⁰ written by Robert Steyer and published on September 30, 2019 titled "Public pension funds abandon 8% dreams" which states:

"Only three of 129 public plans tracked by the National Association of State Retirement Administrators have assumed rates of return at 8%.

In 2010, by contrast, 59 plans had assumed rates of return of 8% and another 30 had rates higher than 8%, said Alex Brown, NASRA's research manager. As recently as 2015, NASRA reported that 24 plans had rates of 8% and four had rates exceeding 8%."

According to the NASRA release in October 2019, *Latest Investment Return Assumptions*, the three plans referenced are: Texas County & District, Ohio Police and Fire, Arkansas State Highway ERS.

However, for the June 30, 2018 year, TRSL actually had return assumptions of 8.05%; and for the June 30, 2019 year, TRSL had 7.95%. Therefore, for the 2018 year, TRSL was also over 8% (making a total of five such retirement systems over 8%). That gave TRSL the highest return assumption (tied with LASERS) of all systems in the NASRA Survey for that year. Refer to Section 3 below more information on this matter.

The Advocate

An article dated June 9, 2019, published by The Advocate¹¹ stated:

In the case of TRSL, investment returns underperforming relative to expectations have added \$4.2 billion to the system's unfunded liability since 2000. During the bull market following the 2008 recession, pension system investments have only averaged 6.7% in returns according to TRSL — well below its current 7.65% investment return expectation.

These quotes in the press are picked up from press releases issued by TRSL.

Implicit Assumptions

TRSL's *actuarial method* of reducing the return assumption by some number of basis points to approximate the cost of future COLAs is an "implicit" approach to recognizing future COLAs. Even though the implicit method is technically permitted by ASOPs, implicit approaches to assumption-setting are generally not favored by most actuaries. During the late 1970s and the 1980s, the actuarial profession actually changed its standards to require assumptions to be explicit and transparent, with each assumption being reasonable individually, not just reasonable in the aggregate.

¹⁰ <https://www.pionline.com/pension-funds/public-pension-funds-abandon-8-dreams>

¹¹ https://www.theadvocate.com/baton_rouge/opinion/article_99db49ee-87cb-11e9-9597-6f75d74846ee.html

For example, there was a time when actuaries routinely used no salary increases in valuations because the return assumption was deliberately set lower than would be expected as a separate individual assumption. The practice of adjusting one assumption to cover another has almost been eradicated. Granted, this method of lowering the return assumption to recognize gain-sharing COLAs is not as egregious as the salary scale/return assumption example, because the frequency and amount of gain-sharing COLAs are indeed directly related to investment earnings. Nevertheless, a lesson from the history of actuarial practice speaks to setting each assumption on its own and guides us toward an alternate (and more explicit) *actuarial method* of recognizing gain-sharing COLAs in advance.

Implicit assumptions lack transparency.

A more appropriate approach would be to set the investment return assumption first, using a disciplined forecasting *process*, and use that as the discount rate, so that the return assumption equals the discount rate thereby removing the confusion. Under this more appropriate approach, gain-sharing transfers are recognized in advance using one of two alternate explicit and transparent *actuarial methods* described below.

Gain-sharing Recognition Methods

The System and its actuary acknowledge that future gain-sharing COLAs are sufficiently likely to occur, that they recognize them in the measurement of costs and liabilities by carving off 40 basis points from their otherwise expected return to pay for them. Based on that acknowledgment, TRSL and its actuary recognize a COLA liability in advance for funding purposes. In other words, the incidence of a gain-sharing COLA being granted has actuarially measurable probabilities. And as a result, taxpayers will be required to contribute in advance for benefits that are actuarially likely to occur in the future. We agree with the TRSL's board and actuary's decision to recognize the likelihood of future gain-sharing COLAs in their funding valuations.

As discussed above, the particular *actuarial method* currently used to recognize the cost of future COLAs is to reduce the return assumption by 40 basis points to obtain a discount rate. The 40 basis points is estimated by TRSL to be the average annual amount of plan assets transferred to the Experience Account each year. Of course, such a transfer is not expected to occur every year. Some years will have none; some years will have a smaller amount; and some years will have a larger amount transferred. Regular and consistent granting of COLAs by the Legislature whenever permitted by the template causes the Experience Account to be emptied, leaving room for more transfers in future years.

However, there are two other *actuarial methods* that are more transparent and explicit (as opposed to implicit) that will recognize gain-sharing COLAs without the confusion and inconsistencies described above and without a significant difference in contribution rates. Each of these two methods use the same type of Monte Carlo stochastic simulation as was needed to estimate the 40 basis points.

1. *Single equivalent annual COLA assumption.* The simulation captures information about the frequency and magnitude of each year's potential transfer to the Experience Account. The mean (average) transfer amount can be considered a benefit stream. Solving for x , an annual equivalent COLA having the same actuarial present value over the next 30 years as the average simulated transfer amount can be determined.
2. *Single equivalent benefit load assumption.* Dividing that same mean (average) transfer stream for each year by its regular benefits payable for that year, as captured from the open group forecast valuation, provides an estimate of the load on benefits that approximates the average transfer amount.

Either of these two alternative *actuarial methods* is acceptable and preferable, in our opinion, to TRSL's current method. There are various benefits of adopting either of these two alternative methods in lieu of the current method:

- Both of these two alternative methods allow the return assumption to equal the discount rate, which will greatly improve the public disclosures.
- Neither of these two alternatives is implicit, but both are transparent and explicit *actuarial methods* for recognizing the actuarially measurable likelihood of future gain-sharing COLAs for funding purposes.
- Both of these two alternatives would solve some confusion with respect to the statutes' reference to "assumed rate of return" or "assumed valuation rate" or "actuarially assumed rate of return" or "valuation rate," etc. Currently, TRSL applies its discount rate (not the assumed rate of return) whenever the statute refers any of these terms. The statute does not contemplate a discount rate different from the return assumption. Both of these two alternative *actuarial methods* eliminate the broad range interpretations applied under the current method.

Moving to either of these two alternative *actuarial methods* of recognizing gain-sharing COLA benefits would synchronize the return assumption with the discount rate and, thereby, comply more simply with the statutes. That is a much better solution than a legislative fix to conform to the statutes to the way TRSL and its actuary are employing a separate return assumption from the discount rate.

- The *first alternative method* above is preferable because it actually incorporates a specific equivalent annual COLA as the approximation rather than a mere load-factor. This provides useful information to management and legislators as to how much COLA is expected out of the current complex statutory template. According to our research and analysis, an annual fixed COLA that is equivalent to the expectations of the current complex statutory template approximately a half percent annual COLA.

Summary

For several years there has been a lack of transparency about TRSL's return assumption. The rates being publicly disclosed have been significantly lower than TRSL's true assumed rate of return.

A simple and approximately cost-neutral solution would be to employ the *first actuarial method* above for recognizing future gain-sharing COLAs. That would make the discount rate the same as the return assumption, i.e., they both would be the true current return assumption of 7.95% for 2019.

Section 2: Inconsistency in Funding vs. Accounting

There are two inconsistencies in the board's actuarial valuations between funding and accounting. These are closely related to the issues described in the previous Section 1.

Recognition of Future COLAs

For funding valuation reports, TRSL includes the cost of future gain-sharing COLA benefits in its calculations. However, for accounting purposes, it does not.

- For funding purposes, TRSL is telling taxpayers they must pre-fund the cost of future COLAs because there is an *actuarially measurable likelihood* of future COLA benefits that must be recognized in advance, in accordance with the ASOPs.
- However, for accounting purposes, TRSL is telling users of financial statements there is no *actuarially measurable likelihood* of future COLA benefits.
- One audience gets one message, while another audience gets another message on exactly the same topic. The two messages are inconsistent.

It is beyond the scope of this CAR to demonstrate why the GASB standards call for the recognition of future gain-sharing COLAs. But a short common-sense approach is that “any material plan benefit that has an actuarially measurable likelihood of being paid” should be measured and recognized in financial disclosures of the plan or any participating employer.

This is the same actuarial standard applied to all plan benefits: retirement, DROP, disability, death, refunds of contributions, etc. It should also be applied for reasonably expected future gain-sharing COLAs, just like TRSL does for funding purposes.

All benefits that are reasonably expected, actuarially measurable, and material should be recognized for funding and accounting. In our opinion, TRSL should be consistent in disclosing the same thing in two places. Since it is the same thing that is being forecasted – reasonably expected COLAs – it should have the same answer for all audiences.

Return Assumption

TRSL's funding and accounting valuations are both tied to a pre-selected 7.55% discount rate, with the 7.55% rate reduced 5 basis points per year until it attains 7.50% next year.

- For funding purposes, TRSL tells taxpayers 7.95% is the return assumption expected on its portfolio.
- However, for accounting, TRSL tells users of financial statements 7.55% is the return assumption expected on its portfolio.
- Once again, one audience gets one message while another audience gets another message on exactly the same long-term return assumption. The two messages are inconsistent.

In our opinion, TRSL should be consistent in disclosing the same thing in two places. Since it is the same thing that is being forecasted – the expected return on the total portfolio – it should have the same answer for all audiences.

If TRSL's board were to adopt either of the two alternative *actuarial methods* of recognizing future gain-sharing COLA benefits described in the previous section, it could solve both inconsistency problems between funding and accounting.

- For both funding and accounting, TRSL would use and disclose the same actuarial return assumption.
- For both funding and accounting, TRSL would still be able to disclose the same discount rate and
- For both funding and accounting, TRSL would be recognizing the *actuarially measurable likelihood* of COLAs being granted.

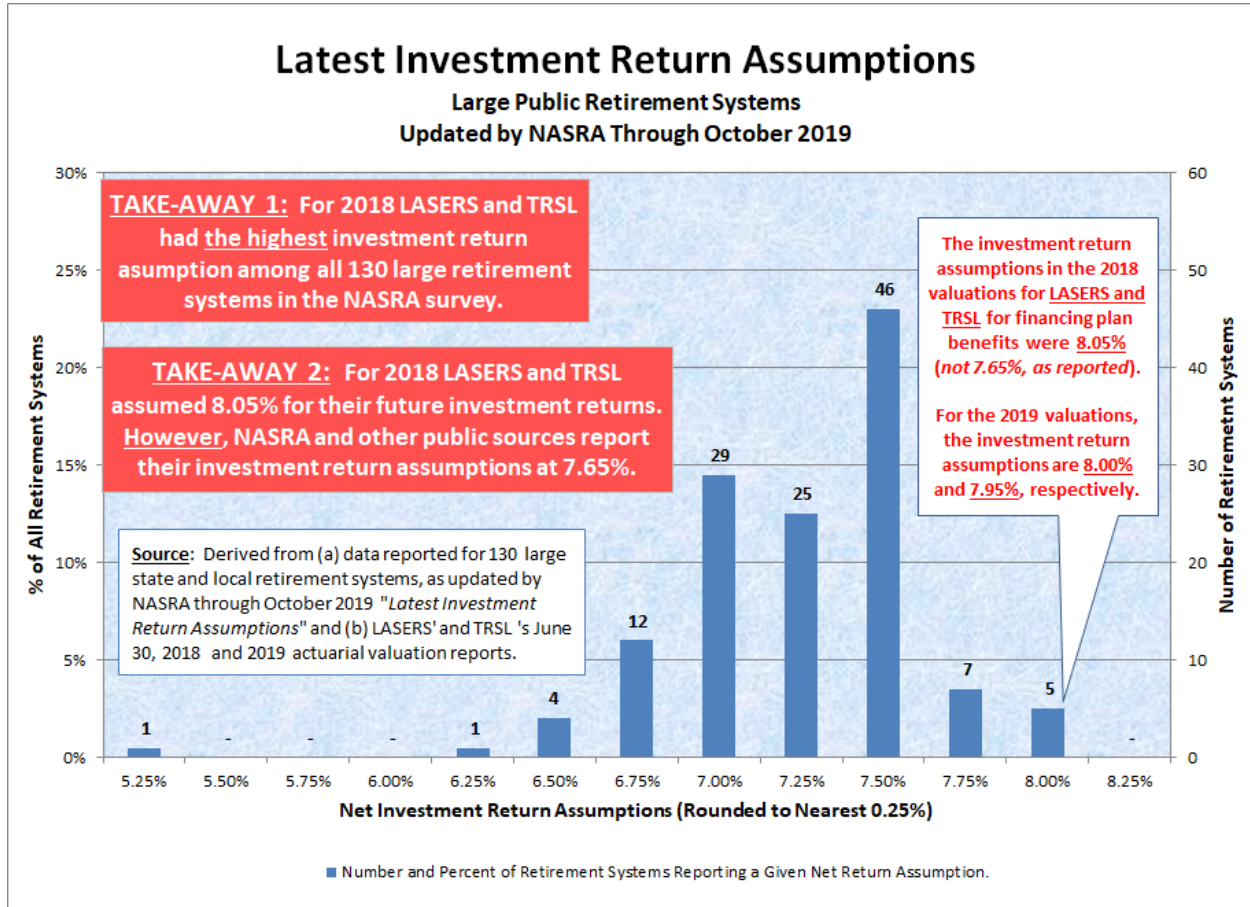
This would be a strong step forward to improve transparency and consistency and to avoid confusion. Using this approach, the true return assumption of 7.95% would be the rate that is publicly disclosed.

Section 3: Overly Optimistic Return Assumption

A comparable disclosure (apples-to-apples) of the System’s return assumption puts it at the high end of the most aggressive return assumptions in the Public Plan Database and the NASRA Survey. It was already established above that TRSL’s return assumption was 8.05% for 2018 and 7.95% for 2019.

Not Conservative Compared to Other Retirement Systems

For perspective, the following chart presents the distribution of 2018-2019 return assumption for large retirement systems, using the NASRA Survey¹².



Consider the following conclusions from this exhibit and the NASRA publication.

1. The median return assumption was 7.25% in the latest survey.
2. If the public believes TRSL’s return assumption is 7.65% (as it has been told), the reader of published surveys might come away with a misplaced comfort that TRSL’s assumption is similar to the assumptions of its peer group of retirement systems.

¹² <https://www.nasra.org/latestreturnassumptions>, and the previous Issue Brief: <https://www.nasra.org/returnassumptionsbrief>

3. However, TRSL’s return assumption is actually 8.05% for the June 30, 2018 actuarial funding valuation and the employer contribution rate for the FYE 2019, as we have established in the beginning; and is actually 7.95% for the 2019 actuarial funding valuation.
4. TRSL’s 7.95% (and 8.05%) return assumption is not conservative but should be considered at the high end of aggressive assumptions compared to all other state and statewide retirement systems in the survey as of 2018-19.

Not Conservative After Adjusting for Asset Allocation

Some might argue that TRSL’s return assumption is higher than other retirement systems because its risk profile is more aggressive than other retirement systems; and that since more risk is taken, then higher returns should be expected.

TRSL’s risk profile indeed is more aggressive than most public retirement systems; and conventional wisdom confirms that higher returns are generally expected when more risk is taken prudently.

However, that is not sufficient to explain the TRSL return assumption’s status at the highest end. Even after adjusting for TRSL’s risk profile as expressed in its target asset allocation, the return assumption is still not “conservative.”

For several years, we have found TRSL’s return assumption to be near or over the highest rate forecasted by professional experts, after adjusting for its own asset allocation. The remainder of this Section 3 details how, even after adjusting for its own allocation of assets, TRSL’s return assumption is not conservative but at the upper end of the mainstream of professional expert forecasters for LAERS’ portfolio and sometimes even higher than the highest forecast.

Asset Allocation

The current target asset allocation is composed of the following target asset allocation percentages, as set forth in the System’s formal Investment Policy Statement last updated July 18, 2019.

2019 TRSL Target Asset Allocation			
Risk-oriented Assets		Fixed Income Assets	
Large/Mid Cap U.S. Equity	20.0%	Core U.S. Fixed Income	9.0%
Small Cap US Equity	5.0%	High Yield Bonds	4.0%
International (Non-U.S.) Equity	11.0%	Non-U.S. Developed Bonds	2.0%
Emerging Markets Equity	8.0%	Emerging Market Bonds	3.5%
REITs	2.0%		
Core Real Estate	5.0%		
Non-Core Real Estate	5.0%	<i>Total Fixed Income Assets</i>	<i>18.5%</i>
Private Equity - Corporate Finance/Buy	11.0%		
Private Equity - Venture Capital	3.0%		
Private Equity - Mezzanine	5.0%		
Private Equity - Distressed Debt	3.0%		
Infrastructure	1.5%		
Commodities	1.0%		
Farmland	1.0%		
<i>Total Risk-oriented Assets</i>	<i>81.5%</i>	<i>Total Asset Allocation</i>	<i>100.0%</i>

Source: Current TRSL Investment Policy Statement (Effective July 11, 2019)

As mentioned above, this asset allocation is riskier than other public pension funds. Foreign stocks are allocated 19%, real estate is allocated 12%, and alternatives are allocated 25.5%. Even the fund's allocations to fixed income assets include some that are risk-oriented.

We make no commentary on whether the portfolio should have a high, medium, or low risk profile. That is beyond the scope of this report. But given TRSL's current higher-than-average risk profile, it is, therefore, expected to earn somewhat more than others with more conservative portfolios. As a result, this System's expected rate of return should be greater than other retirement systems with lower allocations to risk assets.

TRSL's Investment Return Forecasts from Independent Experts

We applied the target asset allocations to the expectations of 14 major national investment forecasters in the GRS Survey.

These 14 firms are independent of the LLA's office and independent of GRS. This way, all parties can be assured there is no real or perceived agency risk or bias in the comparison tables or in the selection of the most appropriate return assumption by the Actuary for the LLA.

Listed below are the national firms in our 2019 GRS Survey. These are among the largest and most reputable investment consultants and investment managers, with depth and strong qualifications in their research staff and with significant public sector pension clients. These are high-profile investment forecasters.

Participating Investment Forecasters			
Aon/Hewitt ^{IC}	Blackrock ^{IM}	BNY/Mellon ^{IM}	Callan ^{IC}
Cambridge ^{IC}	J.P. Morgan ^{IM}	Marquette ^{IC}	Meketa ^{IC}
Mercer ^{IC}	RVK ^{IC}	NEPC ^{IC}	Summit ^{IC}
	VOYA ^{IM}		Wilshire ^{IC}

^{IC} In the top 25 largest investment consultants, according to the most recent survey from P&I.

^{IM} In the top 75 largest investment managers, according to the most recent survey from P&I/WTW.

We mapped the System's most recent target asset allocation to each of these 14 investment forecasters' expected returns published for 2019, by asset class. We did the same for GRS' 12 investment forecasters in 2018.

Below are the results of this process for each investment forecaster, based on the 2019 and 2018 forecasts.

Based on 2019 Forecasts

Investment Forecaster	Distribution of 10-Year Compound Average Percentile Expectations			Probability of exceeding 7.95%
	40th	50th	60th	
(1)	(2)	(3)	(4)	(5)
1	4.28%	5.23%	6.19%	23.75%
2	4.90%	6.08%	7.27%	34.55%
3	4.97%	6.09%	7.21%	33.77%
4	5.10%	6.11%	7.14%	32.58%
5	5.54%	6.47%	7.41%	34.56%
6	5.64%	6.94%	8.25%	42.27%
7	5.97%	6.98%	7.99%	40.41%
8	5.91%	7.07%	8.25%	42.51%
9	6.26%	7.36%	8.46%	44.60%
10	6.35%	7.46%	8.59%	45.60%
11	6.65%	7.80%	8.96%	48.66%
12	7.00%	8.18%	9.36%	51.94%
13	7.03%	8.20%	9.38%	52.15%
14	7.37%	8.25%	9.13%	53.40%
Average	5.93%	7.01%	8.11%	41.48%

Based on 2018 Forecasts

Investment Consultant	Distribution of 10-Year Average Compound Net Nominal Return			Probability of exceeding 8.05%
	40th	50th	60th	
(1)	(2)	(3)	(4)	(5)
1	4.78%	5.78%	6.80%	28.62%
2	4.86%	6.07%	7.28%	34.02%
3	5.05%	6.25%	7.45%	35.29%
4	5.19%	6.30%	7.41%	34.60%
5	5.34%	6.33%	7.32%	33.10%
6	5.24%	6.44%	7.65%	36.83%
7	5.14%	6.52%	7.93%	39.15%
8	5.59%	6.56%	7.55%	35.11%
9	5.60%	6.66%	7.72%	37.02%
10	5.74%	6.84%	7.94%	39.04%
11	6.00%	7.16%	8.34%	42.43%
12	7.54%	8.42%	9.31%	54.24%
Average	5.51%	6.61%	7.72%	37.45%

The middle columns in these two tables represent the professional forecasters' 50th percentile expectation of TRSL's total portfolio for the average compound return over the following 10 years. The GRS Survey included 14 forecasters for 2019 and 12 forecasters for 2018.

2019

Nine (9) out of the 14 forecasts lie between 6.08% and 7.46%. The lowest one (5.23%) among all 14 lies far from next lowest forecast (6.08%), while a few at the high end are sharply higher than the 7.46% forecast.

We include all forecasters' expectations in the consensus average (7.01%); after all, they are subject matter experts' forecasts. However, examining the lowest and highest forecasts helps understand the outliers. Even if the 7.01% were adjusted upwards slightly to reflect cash flow expectations, it is still nowhere near 7.95%.

Based on this research, in our opinion, a return assumption of 7.95% for a 2019 valuation appears overly optimistic for TRSL's portfolio, compared to the consensus average of 7.01% among many nations forecasting experts.

2018

Ten (10) out of the 12 forecasts lie between 6.07% and 7.16%. The lowest one (5.78%) among all 12 lies somewhat below the next lowest forecast (6.07%), while the one at the highest end (8.42%) lies substantially higher than the 7.16% below it.

Again, we include all forecasters' expectations in the consensus average (6.61%), but examining the lowest and highest forecasts helps understand the outliers.

Based on this research, in our opinion, a return assumption of 8.05% for a 2018 valuation appears overly optimistic for TRSL's portfolio compared to the consensus average of 6.61% among many nations forecasting experts.

2017

While not displayed herein, consider the 50th percentile return expectations among professional forecasters in the GRS Survey for 2017. The consensus average was 6.74% and the highest forecast was 8.04% (and next highest was 7.21%), while TRSL's return assumption was 8.20% and

We can debate around the fringes about time horizon and cash flow adjustments, but the primary point in this section is: In our opinion, a return assumption of 8.20% for a 2017 valuation appears overly optimistic for TRSL's portfolio compared to the consensus average of 6.74% among many nations forecasting experts.

We would be glad to supplement these results with more detailed descriptions of the process and methodology for developing this table if requested.

Please refer to **Appendix 1** for a comparison of how much TRSL has reduced its return assumptions in recent years, compared to how much other large retirement systems have reduced theirs.

Also, please refer to **Appendix 2** for public quotes in the press from representatives of other large retirement systems and other state officials on the importance of their own reductions in return assumptions.

Section 4: Valuation Report Using Two Separate Discount Rates

Currently, when the discount rates are changed by TRSL's board of trustees and actuary, they are changed for the purpose of calculating the contribution rates for the prospective year.

Those new discount rates are not used as of that current valuation date to calculate and disclose the current unfunded accrued liability, current funded ratio, current normal costs as of the current valuation date, or the current size of a COLA that might be permitted. The new rate each year is used to calculate the prospective year's contribution rates.

Consequently, within the same actuarial valuation report, different discount rates are used for disclosure of the liabilities from what is used for the prospective year's contribution requirements.

TRSL's 2019 actuarial valuation report presents a discount rate (7.55%) used for various numbers and a separate discount rate (7.50%) used for other numbers. Therefore, within the same report:

- The discount rate of 7.55% is used to calculate the contribution requirements for FYE 2020 while also being used to calculate and disclose the current unfunded accrued liability, current funded ratio, and current normal costs as of June 30, 2019, and
- The discount rate of 7.50% is used to calculate and disclose the contribution requirements for FYE 2021, comprised of its own normal cost and its own set or amortization payments. It is not used to calculate or disclose any current unfunded accrued liability, current funded ratio, or current normal costs.

Consequently, within the same actuarial valuation report, different discount rates are used for disclosure of the liabilities from what is used for the prospective year's contribution requirements. This can be a confusing approach.

This dual-discount rate report approach is not what would be considered a mainstream actuarial treatment. Besides TRSL, LASERS is the only other state or statewide retirement system in Louisiana using this approach.

For clarity and for consistency with common actuarial practice, when there is a change in the discount rate assumption and other assumptions, typically, all actuarial calculations and disclosures are made using the new assumption. This would improve the valuation: for simplicity, for transparency, and for consistency with actuarial practice around the country and in Louisiana's other retirement systems.

Refer to Item X(1) on page 1 of TRSL's 2019 valuation report. The number of interest rates there is overwhelming. There are:

- Four rates in the one column for June 30, 2019 (two for the current and two for next year),
- Four rates in the column for 2018, and
- Four rates in the column for 2017.

Actuarial valuation reports are hard enough to understand with only one rate used to develop all the numbers. Most have only one rate (for return assumption equal to discount rate, used for current calculations and prospective year's contribution). However, to build into a valuation report multiple rates used to calculate different numbers seems to obscure the results. We recommend when a new assumption is adopted (whether an economic assumption or a demographic assumption), it be used to calculate all the numbers.

The advantages of the recommended approach are that the valuation would be:

- a. *Simple.* Less complicated for a given actuarial valuation report.
- b. *Transparent.* Clear as to what the assumptions are; no confusion with multiple assumptions used for different purposes in the same report.
- c. *Consistent with actuarial practice.* Consistent with the method used by other actuaries around the country and in Louisiana when assumptions are changed.
- d. *Consistent with the need for new assumptions.* If a new set of assumptions is more appropriate, and is adopted for use in an actuarial valuation, the new set of assumptions should consistently be used for all purposes throughout the actuarial valuation report.

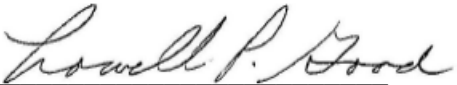
Actuarial Certification

This report constitutes a Statement of Actuarial Opinion. It has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents information it is purported to present. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Lowell P. Good and James J. Rizzo are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.


The signing actuaries are independent of the Teachers' Retirement System of Louisiana.

We would be pleased to review this Comprehensive Actuarial Review with you or other parties and to answer any questions pertaining to it.



Lowell P. Good, ASA, EA, MAAA
Actuary for the Louisiana Legislative Auditor

November 27, 2019
Date



James J. Rizzo, ASA, MAAA
Senior Consultant and Actuary
Gabriel, Roeder, Smith & Company

November 27, 2019
Date

APPENDIX 1

Discount Rate and Return Assumption Reductions Among Large Retirement Systems

The following tables compare the last four (4) years' reductions in return assumptions among dozens of large pension funds in the Public Plans Databases.

In response to recommendations to lower the return assumptions or discount rates, a common response is the phrase "We just can't afford that." However, as evident in the tables below, budget directors and elected officials in dozens of other state and local governments have found ways to afford lowering their discount rates; and some of them are in budgetary crises.

Budgets are all about priorities. Constitutions and statutes often require retirement systems adhere to actuarial soundness. That requirement coupled with the fiduciary obligation to provide an actuarially secure retirement benefit to career public servants should constitute a priority on the state and local governments' budgets.

While the "We just can't afford it" argument is not to be ignored (it is very real), an equally important issue is one of employing a robust actuarial process to adopt mainstream return assumptions, and let the budget issues be solved in other ways.

A return assumption or discount rate is not a lever to adjust up or down, to allow other worthy causes to be includable in the current year's budget to the exclusion of, or at the expense of: (a) the previous benefit promise made to career public servants and (b) the constitutional and statutory requirement to fund the retirement systems on a sound actuarial basis.

Pension benefits have already been promised and earned to date. In our opinion, constitutional and fiduciary requirements should make the "We just can't afford it" argument subservient to the primary duty of managing the retirement systems with actuarial integrity – for the sake of the plan members' benefit security.

If the experts are right, retaining an overly optimistic return assumption will systematically delay contribution requirements. No real savings is achieved – only deferred again and again.

Consider also Appendix 2 presenting quotes in the general press over the past few years from officials around the country concerning their commentary on the reductions they made in their discount rates and return assumptions.

Reductions in Pension Return Assumptions Adopted for 2015-2018 Valuations		Total Over 4 Years	Reduction in 2015 from 2014	Reduction in 2016 from 2015	Reduction in 2017 from 2016	Reduction in 2018 from 2017
1	Kentucky County	-2.00%	-0.25%	0.00%	-1.75%	0.00%
2	Kentucky ERS	-2.00%	-0.25%	-0.70%	-1.05%	0.00%
3	Utah Public Safety	-1.50%	-0.30%	0.00%	1.10%	-2.30%
4	Houston Firefighters	-1.25%	0.00%	-1.25%	0.00%	0.00%
5	Michigan Municipal	-1.20%	-0.25%	0.25%	0.00%	-1.20%
6	Detroit General RS	-1.15%	-1.15%	0.00%	0.00%	0.00%
7	Connecticut SERS	-1.10%	0.00%	-1.10%	0.00%	0.00%
8	Vermont State Employees	-1.00%	-0.55%	0.00%	-0.45%	0.00%
9	Vermont Teachers	-1.00%	-0.55%	0.00%	-0.45%	0.00%
10	Connecticut Municipal	-1.00%	0.00%	0.00%	0.00%	-1.00%
11	Michigan Public Schools	-0.95%	0.00%	-0.50%	-0.45%	0.00%
12	Minnesota GERF	-0.91%	-0.41%	0.00%	0.00%	-0.50%
13	Minnesota State Employees	-0.91%	-0.41%	0.00%	0.00%	-0.50%
14	Minnesota Teachers	-0.91%	-0.01%	0.04%	0.03%	-0.97%
15	Ohio PERS	-0.80%	0.00%	-0.50%	0.00%	-0.30%
16	Texas Teachers	-0.75%	0.00%	0.00%	0.00%	-0.75%
17	Milwaukee City ERS	-0.75%	0.00%	0.00%	-0.25%	-0.50%
18	New York State Teachers	-0.75%	-0.50%	0.00%	0.00%	-0.25%
19	Missouri State Employees	-0.75%	0.00%	-0.35%	-0.15%	-0.25%
20	Louisiana State Parochial Employees	-0.75%	-0.25%	0.00%	-0.25%	-0.25%
21	Hawaii ERS	-0.75%	-0.10%	-0.65%	0.00%	0.00%
22	Chicago Teachers	-0.75%	0.00%	0.00%	0.00%	-0.75%
23	Missouri DOT and Highway	-0.75%	0.00%	0.00%	0.00%	-0.75%
24	San Diego City ERS	-0.75%	0.00%	-0.25%	-0.25%	-0.25%
25	South Dakota RS	-0.75%	0.00%	0.00%	-0.75%	0.00%
26	Wyoming Public Employees	-0.75%	0.00%	0.00%	-0.75%	0.00%
27	Massachusetts Teachers	-0.65%	-0.25%	-0.25%	0.00%	-0.15%
28	Alaska PERS	-0.62%	0.00%	0.00%	0.00%	-0.62%
29	Alaska Teachers	-0.62%	0.00%	0.00%	0.00%	-0.62%
30	Arkansas PERS	-0.60%	-0.25%	0.00%	-0.35%	0.00%
31	Oregon PERS	-0.55%	-0.25%	0.00%	-0.30%	0.00%
32	Utah Noncontributory	-0.55%	-0.30%	-0.25%	0.00%	0.00%
33	Charleston, WV Firemen's Pension	-0.50%	-0.50%	0.00%	0.00%	0.00%
34	Baltimore Fire and Police	-0.50%	-0.25%	0.00%	0.00%	-0.25%
35	Denver Employees	-0.50%	-0.25%	0.00%	-0.25%	0.00%
36	Massachusetts SRS	-0.50%	-0.25%	-0.25%	0.00%	0.00%
37	San Diego County	-0.50%	-0.25%	-0.25%	0.00%	0.00%
38	Burlington ERS	-0.50%	0.00%	0.00%	0.00%	-0.50%
39	Minnesota Police and Fire	-0.50%	0.00%	0.00%	0.00%	-0.50%
40	New Mexico PERA	-0.50%	0.00%	0.00%	0.00%	-0.50%
41	St. Paul Teachers	-0.50%	0.00%	0.00%	0.00%	-0.50%
42	Texas ERS	-0.50%	0.00%	0.00%	0.00%	-0.50%
43	Connecticut Teachers	-0.50%	0.00%	0.00%	-0.25%	-0.25%
44	Des Moines Water Works	-0.50%	0.00%	-0.25%	0.00%	-0.25%
45	Missouri PEERS	-0.50%	0.00%	-0.25%	-0.15%	-0.10%
46	Missouri Teachers	-0.50%	0.00%	-0.25%	-0.15%	-0.10%
47	Arizona SRS	-0.50%	0.00%	0.00%	-0.50%	0.00%
48	Arkansas Teachers	-0.50%	0.00%	0.00%	-0.50%	0.00%
49	Nebraska Schools	-0.50%	0.00%	0.00%	-0.50%	0.00%
50	Nevada Police Officer and Firefighter	-0.50%	0.00%	0.00%	-0.50%	0.00%

Reductions in Pension Return Assumptions Adopted for 2015-2018 Valuations		Total Over 4 Years	Reduction in 2015 from 2014	Reduction in 2016 from 2015	Reduction in 2017 from 2016	Reduction in 2018 from 2017
51	Nevada Regular Employees	-0.50%	0.00%	0.00%	-0.50%	0.00%
52	New Hampshire RS	-0.50%	0.00%	-0.50%	0.00%	0.00%
53	New Mexico Educational	-0.50%	0.00%	0.00%	-0.50%	0.00%
54	Oklahoma Teachers	-0.50%	0.00%	-0.50%	0.00%	0.00%
55	Omaha School	-0.50%	0.00%	-0.50%	0.00%	0.00%
56	St. Louis School Employees	-0.50%	0.00%	-0.50%	0.00%	0.00%
57	Texas LECOS	-0.50%	0.00%	0.00%	-0.50%	0.00%
58	Illinois Universities	-0.50%	0.00%	0.00%	0.00%	-0.50%
59	Illinois Teachers	-0.50%	0.00%	-0.50%	0.00%	0.00%
60	Jacksonville ERS	-0.50%	0.00%	-0.10%	-0.20%	-0.20%
61	California Teachers	-0.50%	0.00%	0.00%	0.00%	-0.50%
62	Sacramento County ERS	-0.50%	0.00%	0.00%	0.00%	-0.50%
63	Maine Local	-0.50%	0.00%	-0.37%	0.00%	-0.13%
64	Chicago Municipal	-0.50%	0.00%	0.00%	-0.50%	0.00%
65	Iowa PERS	-0.50%	0.00%	0.00%	-0.50%	0.00%
66	NY State & Local ERS	-0.50%	0.00%	0.00%	-0.50%	0.00%
67	NY State & Local Police & Fire	-0.50%	0.00%	0.00%	-0.50%	0.00%
68	Oklahoma PERS	-0.50%	0.00%	0.00%	-0.50%	0.00%
69	Rhode Island ERS	-0.50%	0.00%	0.00%	-0.50%	0.00%
70	Rhode Island Municipal	-0.50%	0.00%	0.00%	-0.50%	0.00%
71	Idaho PERS	-0.45%	0.00%	0.00%	0.00%	-0.45%
72	Arizona State Corrections Officers	-0.45%	0.00%	-0.35%	-0.10%	0.00%
73	Arizona Public Safety	-0.45%	0.00%	-0.35%	-0.35%	0.25%
74	Louisiana Schools	-0.44%	-0.50%	0.12%	0.00%	-0.06%
75	Oklahoma City ERS	-0.40%	-0.10%	0.00%	-0.30%	0.00%
76	New Jersey PERS	-0.40%	0.00%	-0.25%	-0.15%	0.00%
77	New Jersey Police & Fire	-0.40%	0.00%	-0.25%	-0.15%	0.00%
78	New Jersey Teachers	-0.40%	0.00%	-0.25%	-0.15%	0.00%
79	LA County ERS	-0.38%	-0.13%	-0.25%	0.00%	0.00%
80	Maine State and Teacher	-0.37%	0.00%	-0.25%	0.00%	-0.13%
81	Sioux Falls ERS	-0.35%	-0.15%	0.00%	-0.20%	0.00%
82	Alameda County ERS	-0.35%	0.00%	0.00%	0.00%	-0.35%
83	Washington PERS 2/3	-0.30%	-0.10%	0.00%	-0.20%	0.00%
84	Washington School Employees Plan 2/3	-0.30%	-0.10%	0.00%	-0.20%	0.00%
85	Washington Teachers Plan 2/3	-0.30%	-0.10%	0.00%	-0.20%	0.00%
86	Louisiana Municipal Police	-0.30%	0.00%	0.00%	-0.18%	-0.13%
87	Alabama ERS	-0.30%	0.00%	-0.13%	-0.13%	-0.05%
88	Alabama Teachers	-0.30%	0.00%	-0.13%	-0.13%	-0.05%
89	Ohio Teachers	-0.30%	0.00%	0.00%	-0.30%	0.00%
90	Phoenix ERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
91	Seattle ERS	-0.25%	0.00%	0.00%	0.00%	-0.25%
92	Chicago Police	-0.25%	0.00%	-0.25%	0.00%	0.00%
93	Kern County ERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
94	Los Angeles ERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
95	Los Angeles Water and Power	-0.25%	0.00%	-0.25%	0.00%	0.00%
96	Florida RS	-0.25%	0.00%	-0.05%	-0.10%	-0.10%
97	Austin ERS	-0.25%	-0.25%	0.00%	0.00%	0.00%
98	Mississippi PERS	-0.25%	-0.25%	0.00%	0.00%	0.00%
99	North Dakota Teachers	-0.25%	-0.25%	0.00%	0.00%	0.00%
100	Providence ERS	-0.25%	-0.25%	0.00%	0.00%	0.00%

Reductions in Pension Return Assumptions Adopted for 2015-2018 Valuations		Total Over 4 Years	Reduction in 2015 from 2014	Reduction in 2016 from 2015	Reduction in 2017 from 2016	Reduction in 2018 from 2017
101	Texas Municipal	-0.25%	-0.25%	0.00%	0.00%	0.00%
102	Philadelphia Municipal	-0.25%	-0.10%	-0.05%	-0.05%	-0.05%
103	Georgia Teachers	-0.25%	0.00%	0.00%	0.00%	-0.25%
104	Illinois Municipal	-0.25%	0.00%	0.00%	0.00%	-0.25%
105	Montana Teachers	-0.25%	0.00%	0.00%	0.00%	-0.25%
106	Atlanta ERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
107	Charlotte Firefighters' RS	-0.25%	0.00%	-0.25%	0.00%	0.00%
108	Colorado Municipal	-0.25%	0.00%	-0.25%	0.00%	0.00%
109	Colorado School	-0.25%	0.00%	-0.25%	0.00%	0.00%
110	Colorado State	-0.25%	0.00%	-0.25%	0.00%	0.00%
111	Cook County ERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
112	Denver Schools	-0.25%	0.00%	-0.25%	0.00%	0.00%
113	Fairfax County ERS	-0.25%	0.00%	-0.25%	0.00%	0.00%
114	Fairfax County Schools	-0.25%	0.00%	-0.25%	0.00%	0.00%
115	Hartford MERF	-0.25%	0.00%	-0.25%	0.00%	0.00%
116	Kansas PERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
117	Milwaukee County ERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
118	Nashville-Davidson ERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
119	New Castle County Pension	-0.25%	0.00%	-0.25%	0.00%	0.00%
120	North Dakota PERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
121	Ohio Police & Fire	-0.25%	0.00%	-0.25%	0.00%	0.00%
122	Ohio School Employees	-0.25%	0.00%	-0.25%	0.00%	0.00%
123	Omaha Police and Fire	-0.25%	0.00%	0.00%	-0.25%	0.00%
124	Pennsylvania Municipal	-0.25%	0.00%	0.00%	-0.25%	0.00%
125	Pennsylvania School Employees	-0.25%	0.00%	-0.25%	0.00%	0.00%
126	Pennsylvania State ERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
127	South Carolina Police	-0.25%	0.00%	0.00%	-0.25%	0.00%
128	South Carolina RS	-0.25%	0.00%	0.00%	-0.25%	0.00%
129	University of California	-0.25%	0.00%	-0.25%	0.00%	0.00%
130	Wichita ERS	-0.25%	0.00%	0.15%	-0.40%	0.00%
131	Illinois SERS	-0.25%	0.00%	-0.25%	0.00%	0.00%
132	Manchester Ees' Contr Ret System	-0.25%	0.00%	0.00%	0.00%	-0.25%
133	North Carolina Local Government	-0.25%	0.00%	0.00%	-0.05%	-0.20%
134	North Carolina Teachers and State Ees	-0.25%	0.00%	0.00%	-0.05%	-0.20%
135	Contra Costa County	-0.25%	0.00%	-0.25%	0.00%	0.00%
136	Orange County ERS	-0.25%	0.00%	0.00%	-0.25%	0.00%
137	Maryland PERS	-0.20%	-0.10%	0.00%	-0.05%	-0.05%
138	Maryland Teachers	-0.20%	-0.10%	0.00%	-0.05%	-0.05%
139	Georgia ERS	-0.20%	0.00%	0.00%	-0.10%	-0.10%
140	Delaware State Employees	-0.20%	0.00%	0.00%	-0.20%	0.00%
141	Wisconsin RS	-0.20%	0.00%	0.00%	0.00%	-0.20%
142	Miami Fire and Police	-0.16%	-0.08%	0.00%	0.00%	-0.08%
143	San Francisco City & County	-0.10%	0.00%	0.00%	0.00%	-0.10%
144	Montana PERS	-0.10%	0.00%	0.00%	-0.10%	0.00%
145	Louisiana SERS	-0.10%	0.00%	0.00%	-0.05%	-0.05%
146	Louisiana Teachers	-0.10%	0.00%	0.00%	-0.05%	-0.05%

All other systems in the Public Plans Database either had zero reductions throughout the 2015 through 2018 valuations or had return assumption data missing for those years.

TRSL has been at the highest level of return assumptions and at the lowest level of reductions in their return assumption, compared to other large retirement systems.

APPENDIX 2

Quotes About Return Assumption Reductions from Other Retirement Systems

New Jersey
<p>The New Jersey Pension Fund's assumed rate of return has been reduced to 7% from 7.65% by state Treasurer Ford M. Scudder, the second rate cut he has enacted this year. Mr. Scudder had cut the rate to 7.65% from 7.9% in February 2017.</p> <p>"Given the current elevated level of asset values across the board, long-run expected returns have diminished, so it is appropriate to lower the assumed rate of return," Mr. Rijksen wrote [Willem Rijksen, a Treasury Department spokesman]. "Our actuaries have suggested doing so, and it is the unmistakable trend in public pension plans across the country."</p> <p>Pensions and Investments Online (pionline.com), 12/22/17</p>
<p>The move increases the pension tab for state and local governments by more than \$800 million for the fiscal year that begins in July, according to an NJ Advance Media analysis of state actuary reports released Tuesday. The change was praised by the pension fund actuaries, who say a 7 percent assumed rate of return is in line with other large funds and is a more conservative estimate of what pension investments can achieve over the long term. In contrast, assuming the investments will earn a high rate makes the pension fund look healthier than it really is and doesn't reflect the reality of the state's investment outcomes, actuaries say.</p> <p>The state contributes less than what's recommended by actuaries. This year, it's expected to kick in about \$2.5 billion, or half of what's recommended, and it is on track to contribute 60 percent next year.</p> <p>NJ.com, New Jersey Online, 12/22/17</p>
<p><i>Notice a couple observations: (1) Down from 7.9% to 7.65% to 7.0% in 10 months, (2) The change will increase the contribution requirement by more than \$800 million and (3) NJ is roughly tied (with Kentucky) for the worst-funded pension system in the country (30.9% in 2016) and has been contributing only about half the actuarially required contribution under their previously high return assumption, yet they did the "appropriate" thing and lowered the return assumption from 7.9% to 7.0%.</i></p> <p><i>Notice the positive statements about this decision: (1) "a 7 percent assumed rate of return is a more conservative estimate of what pension investments can achieve" (2) "Given the current elevated level of asset values across the board, long-run expected returns have diminished, so it is appropriate to lower the assumed rate of return."</i></p>
Kentucky
<p>Since the last actuarial valuation, the Board adopted changes to certain economic assumptions for KERS, CERS and SPRS. Specifically, the Board decreased the price inflation assumption to 2.30% for all funds. The assumed rate of return was decreased to 5.25% for two of its pension funds, and to 6.25% for the three other pension funds and all the insurance funds associated with the systems.</p> <p>2017 Actuarial Valuation Report</p>
<p>He admonished, "We need to use real numbers . . . We need to use actual data. We need to use true rates of return, and not hypothetical ones."</p> <p>Huffingtonpost.com, 4/4/17, quote from Gov. Matt Bevin</p>
<p>"The most important function of our board is to give correct numbers to the legislature," Farris said. "If we don't do that, if we continue to rely on aggressively optimistic assumptions, then we will continue to fall behind,"</p> <p>Kentucky.com, 5/20/17, quote from board chairman John Farris</p>
<p>"We're trying to make the assumptions more realistic and from an investment standpoint, more in line with structure and expectations of the portfolios," Mr. Eager said.</p> <p>pionline.com, 7/14/17, quote from Interim Executive Director David Eager</p>
<p>[State Budget Director John] Chilton said that Gov. Matt Bevin and state lawmakers believe it is important to embrace the revised financial assumptions. "No more pretending that everything is just fine," he wrote. "Everyone needs to understand the severity of the situation. To do otherwise will lead to solutions that fall short of solving the problem." Kentucky.com, 9/9/17</p>
<p><i>Note a couple observations: (1) Down from 7.5% to 6.35% for some plans and 5.25% for others and (2) KY is roughly tied (with New Jersey) for the worst-funded pension system in the country (31.4% in 2016), yet they did the "more realistic" thing and lowered the return assumption from 7.5% to 6.25% and 5.25%.</i></p> <p><i>Notice the positive statements said: (1) "The most important function of our board is to give correct numbers to the legislature", (2) "We're trying to make the assumptions more realistic and from an investment standpoint, more in line with structure and expectations of the portfolios,"</i></p>

Arkansas

The trustees last week voted to reduce the system's projected annual investment returns from 7.25 percent to 6.25 percent at the recommendation of actuary Gabriel, Roeder, Smith & Co. of Southfield, Mich., . . . [Gail Stone, executive director for the judicial retirement system,] explained that "10-year capital market predictions from a basket of 8 different public fund investment consultants did not support a 7.25 [percent investment] return, given the AJRS fund's very conservative asset allocation."

Arkansasonline.com, 8/14/15

*Notice the **positive statement**: The executive director wanted the return assumption to be consistent with the "10-year capital market assumptions of a basket of 8 different public fund investment consultants."*

New York

New York State Common Retirement Fund, Albany, is lowering its assumed rate of return to 7% from 7.5%. "Lowering the assumed rate of return is fiscally prudent and will better position the state pension fund for the future. This strategic decision is consistent with the tougher investment climate ahead."
pionline.com, 9/9/15, quote from Thomas DiNapoli (State Comptroller and sole trustee)

New York State Comptroller Thomas P. DiNapoli announced the New York State and Local Retirement System's (NYSLRS) long-term assumed rate of return on investments will be lowered from 7% to 6.8%, anticipating a lower return investment environment.

This marks the third time that DiNapoli has lowered the state pension fund's assumed rate of return as economic and demographic conditions have changed. In 2010, he decreased the rate from 8% to 7.5%, and in 2015 to 7%. "Through solid investment returns, prudent management and a diverse portfolio we have kept the state pension fund strong and one of the best funded in the nation. The long-term outlook for investors is changing and requires a more conservative approach. As in years past, we're taking the responsible action of lowering our assumed rate of return now so we can better weather market volatility," DiNapoli said.

*Notice the **positive statements**: (1) Lowering it is fiscally prudent, (2) Lowering the return assumption will put the state pension fund in a better position for the future."*

California Teachers

CalSTRS on Wednesday approved lowering the pension fund's assumed rate of return to 7% from 7.5% over the next two years because of diminished capital market and inflation forecasts. Milliman, the board's actuarial consultant, last month had recommended a reduction to 7.25%, but also offered the board the option of a 7% rate of return.

The plan approved by the board of the \$196.4 billion California State Teachers' Retirement System would lower the rate of return to 7.25% as of July 1, and 7% as of July 1, 2018.

The vote for the more aggressive reduction came at a meeting in San Diego after a report from one of CalSTRS' investment consultants, Pension Consulting Alliance, that the pension fund had a less than 50% chance of meeting the 7.25% rate of return long term. "It's responsible," said board member Harry M. Keiley of the move to 7%. Mr. Keiley said it was necessary to ensure the long-term financial stability of the retirement system.
pionline.com, 2/4/17

"Going to 7.00% would be an acceptable alternative if the board wanted to add another level of conservatism in the actuarial assumptions by increasing the likelihood the investment assumption will be met long term," the report said.

calpensions.com, 1/28/17, quote from the Milliman actuarial experience study

Note a couple observations: (1) CalSTRS investment consultant said there was less than a 50% chance of meeting a 7.25% assumption and (2) The board's investment consultant directed attention to the probability of the compound average return over time reaching the assumption.

*Notice the **positive statements** the Board member made about this move: (1) "It's responsible." and (2) "It was necessary to ensure the long-term financial stability of the retirement system."*

Oregon

The Oregon Public Employees Retirement Fund's board lowered the assumed rate of return for the \$73 billion pension fund to 7.2% from 7.5%, said James Sinks, spokesman for the Oregon State Treasury, in an email. Return projections for the next 10 years are lower than in the prior decade, according to a report presented at the pension fund's July 28 meeting.
pionline.com, 8/1/17

Article about Alaska that mentions California

The nation's largest public employee retirement system has just cut its long-term predictions of how much it expects to earn on its investments to 6.5 percent, raising a caution flag for Alaska, which still has expectations of 8 percent returns.

The assumed long-range investment returns are a key indicator of the financial health of the state retirement programs. Pick a number that is too high and the systems give a false image of financial strength. In addition, it could force a pattern of more aggressive and risky investments.

It is generally easier to get agreement on optimistic numbers, especially when budgets are tight. The difficulty is that you never really know what returns will be until the future becomes the past.

While other states have trimmed back their long-term earnings estimates since 2008, Alaska is still using 8 percent as its target, which is on the high end of pension systems in the United States.

"Some critics of current public pension investment return assumption levels say that current low interest rates and volatile investment markets require public pension funds to take on excessive investment risk to achieve their assumption," the National Association of State Retirement Administrators said in May.

But California Gov. Jerry Brown says the new plan is irresponsible because of the slow pace in lowering expectations, a claim that the California Public Employees Retirement System denies. A more rapid reduction in investment return projections would have increased the strain on local governments, it said. But Brown, expressing more caution than his state's retirement board, said the CalPERS plan is based on "unrealistic investment returns" and assumes an "unacceptable level of risk in the coming years."
Alaska Dispatch News, 12/9/15

Iowa

Iowa Public Employees' Retirement System, Des Moines, lowered its assumed rate of return to 7% from 7.5%, said a news release from the \$28.5 billion pension fund.

Under the changes, the pension fund's funding ratio is expected to fall by roughly four basis points to 80% and liabilities are expected to increase by \$1.4 billion.

The changes follow a review of economic assumptions from actuarial firm Cavanaugh Macdonald Consulting. "Even though these changes will have a negative impact on IPERS' funded ratio, the investment board believes that these modifications will provide a more accurate valuation of future liabilities," IPERS said in the news release.

pionline.com, 3/28/17

*Notice the **positive statement** about the decision "Even though these changes will have a negative impact on IPERS' funded ratio, the investment board believes that these modifications will provide a more accurate valuation of future liabilities,"*

Maryland

"The action taken by the Board is part of its overall strategy to increase the probability of achieving investment returns required to improve the health of the retirement System and meet its obligations to its members," says State Treasurer Nancy K. Kopp, chair of the MSRPS Board of Trustees. "Recognizing that both the inflation experience and expectations for future inflation remain lower than the rate currently assumed, the Board felt it reasonable to reduce the expected return accordingly."

plansponsor.com, 8/2/17

*Notice those two **positive statements** about their changes.*

Other Positive Statements about Lowering the Return Assumption
Harrisburg cannot take advantage of the Act 44 MMO reduction and does not set unrealistically high investment return assumptions which, Mr. McAneny said, has been a key factor in its success in managing its pension funds. Scranton Times-Tribune, 7/9/15
“If we do lower that assumed rate, that would certainly be a conservative approach. And one that I think would be reasonable,” he continued. “The stock market can’t stay up as high as it has forever. I think being a little more conservative would be prudent.” pension360.org, 7/24/15 , quotes from Thomas DiNapoli
“But with the volatile market environment we have seen this year, and will likely see for the next several years, changing the assumed rate of return was a prudent decision,” stated Chief Investment Officer Craig Husting [of Missouri’s school and teacher retirement systems]. psrs.peers.org 6/17/16
The \$7.8 billion pension fund’s board approved the change at its June 16 meeting, Ms. Smith said, to “put the system on a path that reflects the current and expected low-return capital markets and to ensure adequate funding to pay future benefits.” pionline.com, 7/13/16 , quote from Candy Smith, Spokeswoman for the Missouri State Employees’ RS
“This more conservative assumption will require additional state investments into the retirement systems, helping to ensure that available funds will be sufficient to pay the benefits that have been earned,” said a summary of the governor’s proposed budget changes. pionline.com, 2/10/17 , Michigan Gov. Rick Snyder

San Mateo County
San Mateo County Employees’ Retirement Association, Redwood City, Calif., lowered its assumed rate of return to 7% from 7.25%. “In the coming years, lowering the rate will add to the financial strength and stability of the retirement fund by mitigating the effects of future returns that are lower than current expectations.” SamCERA.org News, 7/6/16

General
“The use of such high assumptions is deceptive because it keeps the funded level looking higher than it should be,” said David Crane, public policy lecturer at Stanford University who worked as an adviser to former California Gov. Arnold Schwarzenegger. “Too high a return is dishonest.” news.bna.com, 8/19/15
A lower rate of return can force issuers to face up to their funding commitments,” said Tom Aaron, vice president with Moody’s Investors Service. news.bna.com, 8/19/15
Lockhart also discussed the correlation between macroeconomic growth and pension funding. He recommended that public pension funds align their overall investment return assumptions with realistic assumptions related to macroeconomic momentum and trends. frbatlanta.org, 8/28/15 , quote from Dennis Lockhart, President and CEO of Atlanta Federal Reserve Bank
Actual investment results not equaling the investment return assumption. [Chairman of the Society of Actuaries Blue Ribbon Panel on Public Pension Robert] Stein showed one large pension fund’s 20-year annual return through 2017 was 7%, and its 10-year return was 4.1%, but its investment return assumption during that period was never lower than 7.25%, its current return assumption. ... Public employee fund officials should identify and measure each of these risks for their plans, decide how much risk should be taken, and set asset allocations that best reconcile the plan funding programs with the plans’ tolerance for adverse outcomes. pionline.com, 10/4/18

North Carolina
“We need to make realistic assumptions regarding our ability to achieve expected returns in the future. We owe it to the General Assembly, taxpayers, public employees and future generations to be transparent and realistic about the true valuation of the pension plans,” pionline.com, 5/1/18 , State Treasurer Dale Folwell

Texas Teachers

Brian Guthrie, TRS executive director, told trustees the consensus among outside parties was that market returns will be significantly lower, and he stressed that "not taking action" to lower the assumed rate of return would not be prudent.
Cypen & Cypen E-Newsletter, 8/16/18

Ohio Public Employees

"We are long-term investors, but investment returns over the next 10 to 15 years are very important to our plan," said Karen Carraher, executive director, in the news release.
pionline.com, 10/22/18

Colorado

In the race for Colorado treasurer, Republican Brian Watson is in favor of raising the retirement age to at least to 67 — to match Social Security — as well as reducing or freezing cost-of-living adjustments and dropping Colorado PERA's assumed rate of return from 7.25% to something more "realistic," according to his campaign website.
pionline.com, 10/30/18

Florida

Senate Appropriations Chairman Rob Bradley, a Clay County Republican, says he supports efforts to continue to lower the assumed rate, although it could impact the budgets of the various governments that rely on the fund. But he says a lower rate is more realistic given the fact that the pension investment returns may not be as robust if the economy declines in the long term.
"It's always a concern when you create policies that require cash to be produced in a short period of time for governments that don't have a lot of cash," Bradley said in an interview with the Florida Phoenix. "That being said, what I do see is an economy that will inevitably cool off."
"Therefore, at the end of the day, it doesn't bother me that we moved down the assumption rate a little bit because I think it's reasonable in light of what I think is ahead when I look at the overall health of the economy," he said.
Floridapheonix.com, 11/06/19

As state analysts debated their pension recommendations last month, Ben Watkins, head of the state Division of Bond Finance, warned that the state's top-level credit ratings could be in jeopardy if the credit-rating agencies believe Florida's pension projections were built on unrealistic financial expectations.
"What I see is this is that our credit rating is vulnerable because of the assumptions and the methodologies that we're using that are inconsistent with what they say are prudent and responsible approaches to funding the pension," Watkins said in support of adjusting the pension fund calculations.
Floridapheonix.com, 11/06/19