CALSTRS

Regular Meeting

Item Number 4a – Open Session

Subject: Actuarial Valuation of the Defined Benefit Program and Setting of Contribution Rates

Presenter(s): David Lamoureux and Rick Reed from CalSTRS/ Nick Collier and Scott Preppernau from Milliman

Item Type: Action

Date & Time: May 4, 2022 – 30 minutes

Attachment(s):

Attachment 1 – June 30, 2021 Actuarial Valuation Report for the Defined Benefit Program

Attachment 2 – Proposed Resolution for the State Supplemental Contribution Rate

Attachment 3 – Proposed Resolution for the Employer Supplemental Contribution Rate

Attachment 4 – Proposed Resolution for the Normal Cost Rate for CalSTRS 2% at 62 Members

PowerPoint(s):

Summary of Valuation Results for the Defined Benefit Program

PURPOSE

The purpose of this item is to present the results of the June 30, 2021, actuarial valuation of the Defined Benefit Program and to recommend the adoption of three rates for fiscal year 2022-23: the state supplemental contribution rate, the employer supplemental contribution rate, and the normal cost rate for CalSTRS 2% at 62 members.

SUMMARY

CalSTRS continually monitors the funding plan and the financial health of the fund. Formal assessments of funding levels and risks are provided to the board twice a year. These formal assessments are presented in the spring through this annual actuarial valuation and in the fall through the Review of Funding Levels and Risks report. In addition to these two formal reports, CalSTRS provides updates to the board on the status of various funding-related risks as part of the semi-annual enterprise risk management report. These semi-annual reports are generally presented in September and March of each year.

The CalSTRS Funding Plan provides the board with limited authority to adjust the contribution rates for both the state and employers. The purpose of the actuarial valuation is to provide an assessment of funding levels by taking a snapshot of the fund's assets and liabilities for the Defined Benefit Program as of June 30, 2021, and to determine whether adjustments are needed to contribution rates to keep the funding plan on track to reach full funding by 2046.

Note that the valuation reflects the significant actions that have occurred since the previous actuarial valuation including the large investment return earned in fiscal year 2020-21 of 27.2%, the supplemental payments made by the state in July 2020 and the changes to the actuarial valuation policy adopted by the board at the January 2022 Teachers' Retirement Board meeting.

Funded Ratio

The funded ratio of a pension plan is defined as the ratio of a plan's assets to its actuarial obligation. The table below compares key information about the funded ratio of the Defined Benefit Program between the June 30, 2020 and June 30, 2021 actuarial valuations.

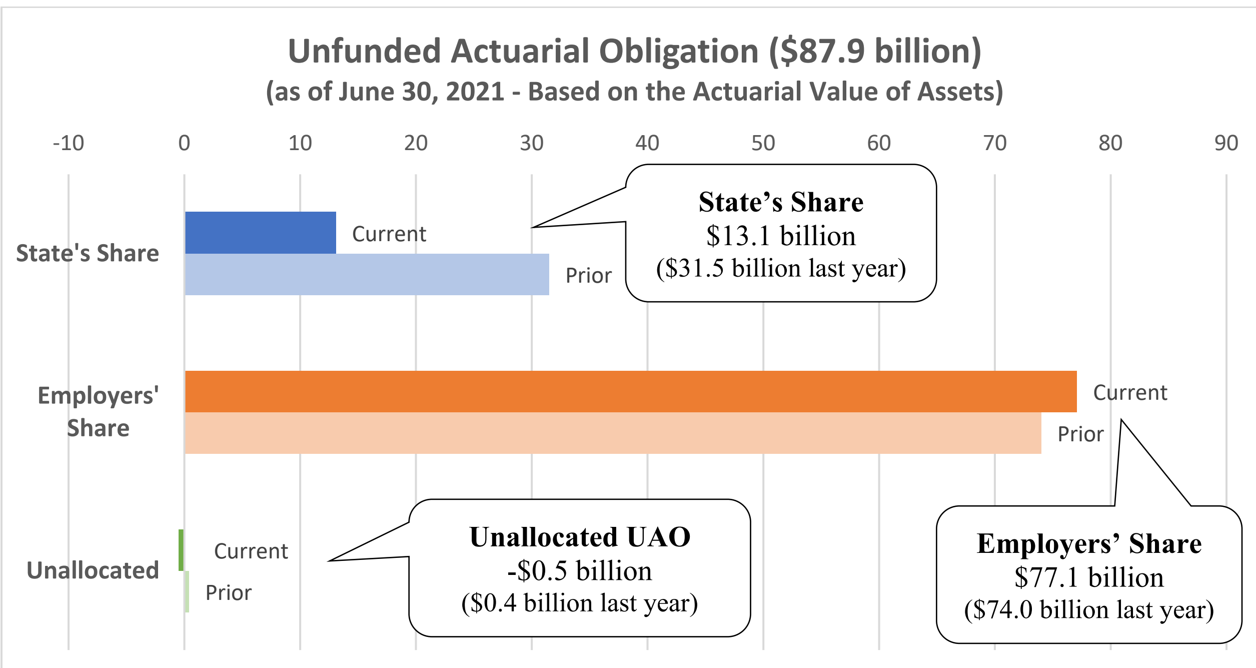
Summary of Key Results for Defined Benefit Program

	June 30, 2021 Valuation	**June 30, 2020 Valuation**
Actuarial Obligation	$332.1 billion	$322.1 billion
Actuarial Value of Assets	$242.4 billion	$216.2 billion
Unfunded Actuarial Obligation	$89.7 billion	$105.9 billion
Funded Ratio	73.0%	67.1%

As illustrated, the funded ratio improved since the 2020 valuation. The funded ratio increased for several reasons, the most significant of which was the large investment return for fiscal year 2020-21 of 27.2%. The funded ratio has also improved due to salaries increasing less than assumed and as a result of a supplemental payment made by the state in the amount of $297 million in July 2020. An additional $410 million supplemental payment was received from the state in July 2021, for the 2021-22 fiscal year, additionally the state is scheduled to contribute $174 million in quarterly contribution from the general fund in excess of the required contributions for fiscal year 2021-22. These additional payments will be reflected in the June 30, 2022 valuation and are reflected in the projections of contribution rates included in the 2021 valuation report.

As a result of the large investment return, the unfunded actuarial obligation (UAO) has also decreased substantially down to $89.7 billion as of June 30, 2021. Furthermore, because of this decrease combined with the recent increases in both State and employer contribution rates, the unfunded actuarial obligation is now expected to decrease each year in the future. Previous projections anticipated that the unfunded actuarial obligation would increase due to what is called negative amortization where the interest on the unfunded actuarial obligation exceeded the contributions received to pay it off.

The unfunded actuarial obligation can be broken down between the state, the employers and the unallocated portion as set forth in the CalSTRS Funding Plan. The unallocated portion of the unfunded actuarial obligation is the portion for which CalSTRS has no authority to adjust contribution rates to pay it down. As the following chart illustrates, the breakdown of the unfunded actuarial obligation has changed significantly since the previous year. As of June 30, 2021, the employers are responsible for about 86% of the entire unfunded actuarial obligation while the state is responsible for about 14%. In previous years, the breakdown was closer to 70% for the employers and 30% for the state. This shift is a result of the investment return and the fact that the state's share of the unfunded actuarial liability is more significantly impacted by the investment return than employers. The chart below also demonstrates the counterintuitive nature of the CalSTRS Funding Plan. For employers their share increases when investment returns exceed the assumed return.



Assuming all actuarial assumptions are met in the future, the unfunded actuarial obligation is now projected to be fully eliminated by 2041, five years earlier than anticipated by the funding plan. Note that the expected date to reach full funding could be pushed back if CalSTRS were to go through a period of investment returns below its assumed 7%. Several of the risks that could prevent the Defined Benefit Program from reaching full funding by 2046 were explained in details in the Review of Funding Levels and Risks report issued last November. The valuation report also includes a discussion of risk. Please see page 47 of the attached report for further details.

State Contribution Rate

The CalSTRS Funding Plan provides the board with the ability to increase the state contribution rate by up to 0.5% of payroll each year. In January, the board adopted a revision to the board's actuarial valuation policy that added a limit of 0.5% of payroll each year on decreases to the state's contribution rate as long as the state has not eliminated its share of the unfunded actuarial obligation.

For the first time under the rules of the funding plan, the June 30, 2021 actuarial valuation has determined that the state's contribution rate can decrease by 0.5% of payroll. This decrease is possible as a result of the large investment return in fiscal year 2020-21 and the resulting decrease in the state's share of the unfunded actuarial obligation. Prior to this valuation, the state's contribution rate had been projected to increase by 0.5% of payroll per year for an additional three years.

Although the valuation indicates the board can decrease the state's contribution rate by 0.5% of payroll, the board has the authority to make no change in the rate. This would be reasonable given the sensitivity of the state's contribution rate to investment volatility, the fact that CalSTRS investment performance to date for fiscal year 2022-23 has been tracking below the 7% target, and the fact the program has a long way to go until reaching a 100% funded ratio.

The following table compares the state contribution rate for this year and provides two options for the contribution rate for next fiscal year.

State Contribution Rate

	June 30, 2021 Valuation (Rate for FY 22-23)		June 30, 2020 Valuation (Rate for FY 21-22)
State's Contribution Rate	**Option 1**	**Option 2**	
Base (DB Program)	2.017%	2.017%	2.017%
Supplemental (DB Program)	6.311%[1]	5.811%	6.311%
Total to DB Program	**8.328%**	**7.828%**	**8.328%**
Contribution to SBMA[2]	2.500%	2.500%	2.500%
Total State Contribution to CalSTRS	**10.828%**	**10.328%**	**10.828%**

Option 1 above would maintain the state's contribution rate at the current level. Option 2 would decrease the rate by 0.5% of payroll for next fiscal year. Considering the extreme sensitivity of the state's share of the unfunded liability to investment performance, it is recommended the board adopt option 1. Option 1 will provide a more stable rate, improve funding levels, and reduce risk in the event of future adverse investment outcomes. It is also worth noting that the Governor's proposed budget, released in January 2022, includes an amount for CalSTRS based on the

[1] Recommended for board adoption.

[2] The state contributes an additional 2.5% of payroll to fund the Supplemental Benefit Maintenance Account (SBMA) that is used to provide inflation protection to CalSTRS retirees and their beneficiaries. Pursuant to Education Code section 22954, the state contribution to the SBMA is reduced by $72 million each fiscal year.

expectation the total state contribution rate to CalSTRS will remain unchanged next fiscal year at 10.828%.

Employer Contribution Rate

Employers are required to contribute a base contribution rate of 8.25% of payroll to CalSTRS as well as a supplemental contribution rate to eliminate their share of the CalSTRS unfunded actuarial obligation by 2046.

For fiscal year 2021-22, the employer supplemental contribution rate is 10.85% of payroll. This rate was adopted by the board at the June 2021 board meeting. The total employer contribution rate in fiscal year 2020-21 is 19.1% of payroll.

However, employers are currently subject to a lower contribution rate. In 2019, the state made an additional payment of $2.246 billion to CalSTRS on behalf of employers. This payment was originally intended to provide short-term rate relief in fiscal years 2019-20 and 2020-21 and to also reduce the employers' share of the unfunded actuarial obligation to provide long-term rate relief. As part of the 2020-21 state budget, the state shifted the portion of the additional payment that was intended to provide long-term rate relief to instead provide greater short-term rate relief by further reducing the employer contribution rate in fiscal years 2020-21 and 2021-22.

As a result, for fiscal year 2021-22, employers are currently contributing a rate of 16.92% of payroll, 2.18% lower than the total rate adopted by the board. Below is a table showing the net employer contribution rate in effect this fiscal year. Note that there is no short-term rate relief scheduled for the 2022-23 fiscal year.

Employer Contribution Rate for Fiscal Year 2020-21

Employer Contribution Rate	**Rate for FY 21-22**
Base	8.250%
Supplemental Rate	10.850%
Total Employer Contribution Rate (Prior to Rate Relief)	**19.100%**
Rate Relief Due to Supplemental Payment Made by the State	(2.180%)
Net Employer Contribution Rate	**16.920%**

Fiscal year 2022-23 marks the second fiscal year for which the board will have the authority to adjust the employer supplemental contribution rate pursuant to the CalSTRS Funding Plan. The board can now adjust annually the employer supplemental contribution rate up or down by a maximum of 1% of payroll in a single year. The total employer rate cannot exceed 20.25% of payroll.

Consistent with statute and the board valuation policy, the annual adjustments to the employer supplemental contribution rate are determined by calculating the employer contribution rate needed to eliminate the employers' share of the unfunded actuarial obligation by 2046.

Based on the results of the June 30, 2021 actuarial valuation and the information known when the valuation was performed, an employer supplemental contribution rate of 10.563% was calculated to be sufficient in fiscal year 2022-23 for the employers to eliminate their share of the unfunded actuarial obligation by 2046. This rate is 0.287% of payroll lower than the employer supplemental contribution rate in effect for fiscal year 2021-22.

Although the current actuarial valuation indicates the employer contribution rate could be reduced and still allow the employers to eliminate their share of the unfunded actuarial obligation by 2046, the projections included in the valuation also indicate the board may need to raise the employer supplemental contribution rate in the future.

The reason the employer contribution rate is expected to need to increase again in the future is the result of two interacting factors. The first is that the full impact of the 27.2% investment return will take three years to be reflected in the contribution rates. This occurs because CalSTRS uses an actuarial value of assets which smooths the volatility of investment returns by reflecting only one-third of the net accumulated investment gains or losses in a year. The other two-third act like a rainy-day fund, if needed, to offset the impact of a potential investment return below the assumed 7%. Thus, it will take about three years for the full impact of the large investment gain to be reflected in contribution rates. The second factor is that the employers share of the unfunded actuarial obligation reacts counterintuitively to investment returns. For employers, their share increases when investment returns exceed the assumed return. Thus, it is expected that the employers share of the unfunded actuarial obligation will increase for another two years as the full impact of the large investment return for fiscal 2020-21 is recognized, resulting in the need to increase the employer supplemental rate in the future

The following table shows the breakdown of the total employer contribution rate under two options, maintaining the supplemental rate at its current level and decreasing the supplemental rate to the level calculated in the valuation.

Employer Contribution Rate for Fiscal Year 2022-23

Employer Contribution Rate	**Option 1**	**Option 2**
Base	8.250%	8.250%
Current Supplemental Rate	10.850%	10.850%
Reduction in Supplemental Rate	**0.000%**	**(0.287%)**
New Supplemental Rate	**10.850%**	**10.563%**
Total Employer Contribution Rate	19.100%	18.813%

Option 1 would maintain the employer contribution rate at its current level. This option is consistent with board policy and is a reasonable option given that the employer rate is projected to need to increase in fiscal year 2023-24 if it is lowered for fiscal year 2022-23. Option 2 would decrease the supplemental rate by 0.287%.

Note, due to the expiration of the short-term rate relief in effect for the 2021-22 fiscal year discussed earlier, either option 1 or option 2 will result in an increase in the effective contribution rate contributed by employers. Under option 1 the effective employer contribution rate will increase by 2.18% of payroll for fiscal year 2022-23 from the fiscal year 2021-22 levels. Option 2 would result in an increase of 1.893% of payroll for fiscal year 2022-23 compared with 2021-22 levels.

It is recommended that the board adopt option 1 to maintain stability in the employer contribution rate going forward.

Member Contribution Rate

Under the California Public Employees' Pension Reform Act of 2013 (PEPRA), 2% at age 62 members are required to pay at least one-half of the normal cost of their Defined Benefit Program benefit, rounded to the nearest quarter of one percent. The normal cost is the annual cost applied to each year of service that is necessary to adequately fund the benefits over time if all assumptions are met. The normal cost does not include costs associated with amortizing, or paying down, any unfunded liabilities. 2% at age 62 members are currently paying 9% toward the normal cost. 2% at age 62 members also contribute an additional 1.205% as per the CalSTRS Funding Plan, for a total contribution rate of 10.205%.

Current law states that the contribution rate for PEPRA members should be adjusted if the normal cost changes by more than 1% since the last time the member contribution rate was adjusted. The last adjustment took place on July 1, 2018 when the contribution rate for 2% at age 62 members increased from 9.205% to 10.205%. As shown on page 6 of the attached report, the normal cost has increased by 0.257% since that time. It is now at 18.150%. This is a cumulative change of less than 1%. Therefore, no change in the 2% at 62 member contribution rate is necessary for next fiscal year. It is recommended the board adopt the normal cost for 2% at 62 members of 18.150%.

The contribution rate for 2% at 60 members is set in statute at 10.250%.

The following table compares the member contribution rates for this year and the next fiscal year.

Member's Contribution Rate	June 30, 2021 Valuation (Rate for FY 22-23)	June 30, 2020 Valuation (Rate for FY 21-22)
2% at 60 Members	10.250%	10.250%
2% at 62 Members	10.205%	10.205%

Note that the number of members subject to the 2% at age 62 formula has been increasing steadily over the last few years. Generally, new teachers hired on or after January 1, 2013 are covered under the 2% at 62 formula. The number of 2% at 62 members has increased by about 2,700 since the 2020 valuation. There were about 131,300 active members as of June 30, 2021. This represents about 31% of the total number of active members on June 30, 2021.

RECOMMENDATION

Staff recommends the board adopt the following rates effective July 1, 2021:

	Recommended Rate
State Supplemental Contribution Rate	6.311%
Employer Supplemental Contribution Rate	10.850%
Normal Cost for 2% at 62 Members	18.150%