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, CalSTRS / Nick Collier and Scott Preppernau, Milliman

Item Type: Action

Date & Time: May 3, 2023 – 30 minutes

Attachment(s):

Attachment 1 – June 30, 2022 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

Item Purpose

The purpose of this item is to present the results of the June 30, 2022, actuarial valuation of the Defined Benefit Program and to recommend the adoption of three rates for fiscal year 2023-24: the state supplemental contribution rate, the employer supplemental contribution rate, and the normal cost rate for CalSTRS 2% at 62 members.

Recommendation

Staff recommends the board adopt the following rates effective July 1, 2023:

	Recommended Rate for Fiscal Year 2023-24
State supplemental contribution rate	6.311%
Employer supplemental contribution rate	10.85%
Normal cost for 2% at 62 Members	18.394%

Executive Summary

CalSTRS continually monitors the CalSTRS 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 March and September 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, 2022, and to determine whether adjustments are needed to contribution rates to keep the funding plan on track to reach full funding by 2046.

Despite the fact the investment return was negative in 2021-22, the Defined Benefit Program funding levels continue to be slightly ahead of the anticipated schedule when the funding plan was adopted in 2014. The exceptional investment return of 27.2% in fiscal year 2020-21 continues to positively impact projected funding levels. As shown in the next section, funding levels have slightly improved over the last year. Current contribution rates continue to be sufficient to keep the funding plan on track.

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, 2021 and June 30, 2022 actuarial valuations.

Summary of Key Results for the Defined Benefit Program

	June 30, 2022 Valuation	June 30, 2021 Valuation
Actuarial Obligation	$346.1 billion	$332.1 billion
Actuarial Value of Assets	$257.5 billion	$242.4 billion
Unfunded Actuarial Obligation	$88.6 billion	$89.7 billion
Funded Ratio	74.4%	73.0%

Both the funded ratio and the unfunded actuarial obligation slightly improved since the 2021 valuation. Even though the investment return was negative in 2021-22, the funded ratio continued to increase due primarily to the large investment return for fiscal year 2020-21.

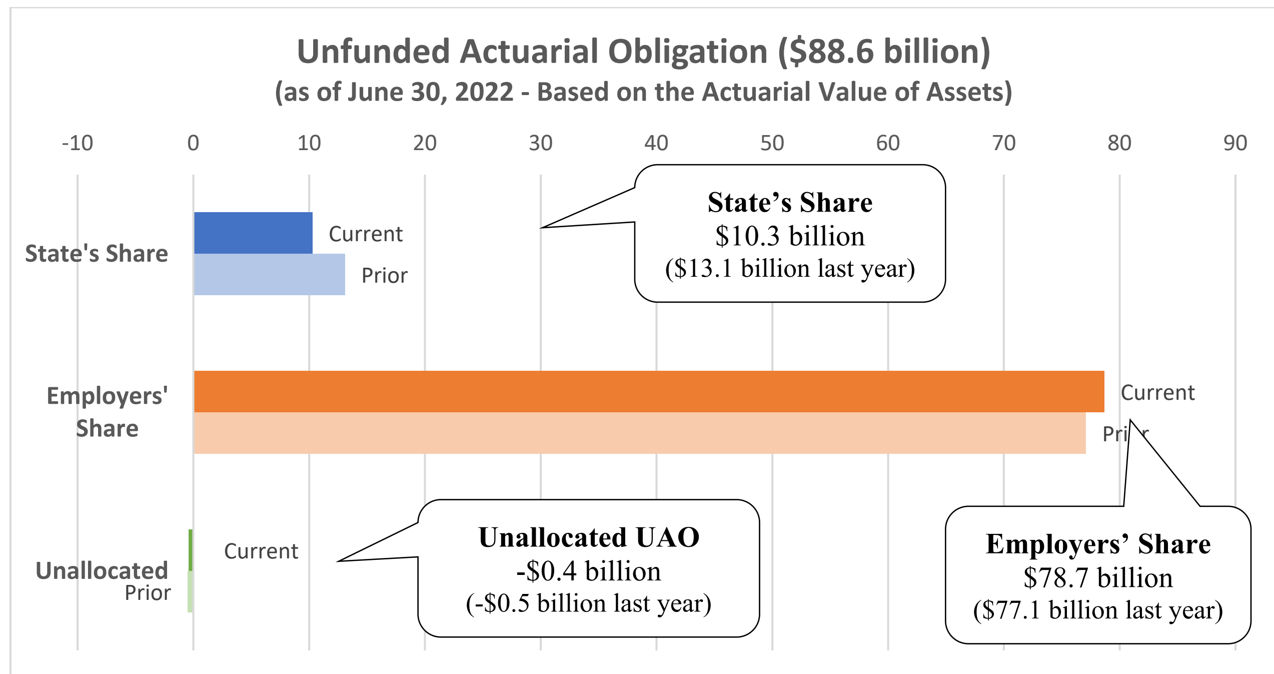
For actuarial valuation purposes, the board has approved the use of an actuarial value of assets which smooths the volatility of investment returns by reflecting only one-third of the net accumulated investment gains or losses in a year. When the 2021 valuation was performed last year, two-thirds of the investment gains from 2020-21 were not reflected in the 2021 valuation and

were set aside to act like a rainy-day fund this year. As shown on page 4 of the attached valuation report, the investment gains that were set aside in the last valuation were more than sufficient to cover the full impact of the negative return in 2021-22. As a result, funding levels continued to improve between the 2021 and 2022 valuations.

Another reason for the improved funding levels and decrease in the unfunded actuarial obligation were the additional supplemental payments made by the state in 2021-22. The state sent $584 million in 2021-22 above what was required by the contribution rate adopted by the board.

As of June 30, 2022, the unfunded actuarial obligation was calculated to be $88.6 billion, down slightly from $89.7 billion as of June 30, 2021. The unfunded actuarial obligation can be broken down between the state, the employers and the unallocated portion as per rules 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 slightly since the previous year. As of June 30, 2022, the employers are still responsible for most of the unfunded actuarial obligation. Employers are responsible for about 89% of the unfunded actuarial obligation while the state is responsible for about 11%.



Assuming all actuarial assumptions are met in the future, the unfunded actuarial obligation is projected to be fully eliminated by 2046. This is a change from last year when the unfunded actuarial obligation was projected to be eliminated by 2041. This change is the result of the negative investment return last fiscal year. This serves as a reminder that CalSTRS ability to reach full funding by 2046 could be impacted 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 detail in the Review of Funding Levels and

Risks report issued last November. The valuation report also includes a discussion of risk. Please see page 49 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. The board's actuarial valuation policy also contains 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 second year in a row, the actuarial valuation has determined that the state's contribution rate could be decreased by 0.5% of payroll. This decrease is once again the result of the large investment return in fiscal year 2020-21.

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 investment markets remain volatile, and the Defined Benefit Program has a long way to go until reaching a 100% funded ratio. Last year the board voted to keep the state supplemental contribution rate at existing levels.

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

	Rate for Fiscal Year 23-24		**Current Rate for Fiscal Year 22-23**
State 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

[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.

proposed budget, released in January 2023, includes an amount for CalSTRS based on the 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 2022-23, the employer supplemental contribution rate is 10.85% of payroll. This rate was adopted by the board at the May 2022 board meeting. The total employer contribution rate in fiscal year 2022-23 is 19.1% of payroll.

This rate has been in effect for the last three fiscal years. However, until fiscal year 2022-23, employers were able to contribute less than 19.1% due to rate relief provided by the state. Rate relief was made possible when the state made an additional payment of $2.246 billion to CalSTRS in 2019 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. The rate relief expired in 2021-22 and no additional rate relief was provided to employers for fiscal year 2022-23. No rate relief has been proposed once again for employers for fiscal year 2023-24.

Fiscal year 2023-24 marks the third 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, 2022 actuarial valuation and the information known when the valuation was performed, an employer supplemental contribution rate of 10.231% was calculated to be sufficient in fiscal year 2023-24 for the employers to eliminate their share of the unfunded actuarial obligation by 2046. This rate is 0.619% of payroll lower than the employer supplemental contribution rate in effect for fiscal year 2022-23.

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	Fiscal year 2023-24		Fiscal Year 2022-23
	Option 1	**Option 2**	
Base	8.250%	8.250%	8.250%
Supplemental Rate	10.850%[3]	10.231%	10.850%
Total Employer Contribution Rate	**19.100%**	**18.481%**	**19.100%**

Option 1 would maintain the employer contribution rate at its current level. Option 2 would decrease the employer rate by 0.619%. Both options are consistent with the board valuation policy.

However, several risks could impact the employers' ability to eliminate their share of the unfunded actuarial obligation by 2046 and could require the board to increase the employer rate in the future. The main risk for employers is the uncertainty around K-12 enrollment levels and how it could impact the future size of the teacher payroll.

Over the last few years, California experienced a decline in enrollment in both K–12 public schools and community colleges. Total enrollment in K–12 public schools in California dropped by about 271,000, or a 4.4% reduction, between 2019–20 and 2021–22. At the same time, the number of students enrolled at community colleges dropped by 316,000 or 20%, between the fall of 2019 and the fall of 2021.

Looking ahead, in September 2022, the State of California updated its projection of K–12 enrollment for California. The updated projection assumes the number of children enrolled in K–12 public schools will continue to decline for the next 10 years. The most recent projection anticipates a decline of about 9% over the next 10 years. Compared to five years ago, this would represent a 12% reduction in K–12 enrollment. Anticipated continued decreases in enrollment in K–12 public schools could lead to future declines in the size of the active membership, resulting in lower than anticipated payroll growth. This could negatively impact CalSTRS' ability to achieve full funding, requiring contribution rate increases for employers.

It is recommended that the board adopt option 1 and keep the employer rate at existing levels to maintain stability in the employer contribution rate going forward, improve funding levels quicker and reduce the likelihood the board may have to raise the employer rate in the future.

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

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[3] Recommended for board adoption.

are met. The normal cost does not include costs associated with amortizing, or paying down, any unfunded liabilities.

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 by 1%. 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%.

As shown on page 7 of the attached report, the normal cost has increased by 0.501% since that time. It is now at 18.394%. 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 18.394%.

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, 2022 Valuation (Rate for FY 23-24)	June 30, 2021 Valuation (Rate for FY 22-23)
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 almost 30,000 since the 2021 valuation. There were about 160,000 2% at 62 active members as of June 30, 2022. This represents about 36% of the roughly 449,000 total number of active members on June 30, 2022.

Review of Actuarial Assumptions

For the last few months, CalSTRS has been working on the asset liability management study that occurs every four years. This process is critical to the long-term sustainability of CalSTRS. It is used to assist the board in making the very important decision of how to invest the CalSTRS portfolio. Several discussions have already taken place at the Investment Committee meetings regarding the asset allocation.

Tied to the asset liability management study is the formal review of the actuarial assumptions used in the funding of the system. This is an important step in the continued monitoring of the funding plan. It helps ensure the economic and demographic actuarial assumptions used to assess funding levels are consistent with long-term expectations. The work needed to review the actuarial assumptions takes place over the course of several months. Milliman, CalSTRS consulting actuary, has begun the work. It is expected that the findings and recommendations

from the formal review of the actuarial assumptions will be presented to the board for adoption at the January 2024 meeting. Any new actuarial assumptions adopted by the board would then be reflected in the June 30, 2023 actuarial valuation that will be presented to the board in May 2024.

Update to Actuarial Standards of Practice

The actuarial work performed by CalSTRS internal and external actuaries are prepared in accordance with certain professional standards. In particular, the Actuarial Standards Board (ASB) provides guidelines in the form of a series of Actuarial Standards of Practices (ASOPs) which set forth principles and standards which actuaries should follow when conducting their work. In December 2021, the Actuarial Standards Board adopted a revision to one of the standards that are applicable to pension plan valuations known as ASOP 4 – Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. These revisions are performed periodically to ensure the standards reflect best practices among the actuarial community.

The revision is effective for valuations prepared on or after February 13, 2023, with measurement dates on or after February 13, 2023. As such, it is not applicable to the attached valuation report which has a measurement date of June 30, 2022, but will be applicable to the valuation report presented to the board next year.

Several changes were adopted in the revision impacting what should be included in valuation reports. Many of the new disclosure requirements are already met by the current valuation report. The most visible addition next year will be the inclusion of a measurement of the actuarial obligation and funded status under a very low-risk asset allocation. This measure is referred to in the standard as a low-default-risk obligation measure (LDROM). Under a low-risk asset allocation the actuarial obligation will be higher, and the funded status will be lower compared to the actuarial obligation and funded status measures used for funding. Although this new measure is a way for plan sponsors to better understand the benefits of a diversified asset allocation in the funding of the plan and how the investment risk taken impacts the funded status, it is possible that some individuals may misuse this new information. CalSTRS staff will work with Milliman to ensure this new information is appropriately explained in next year's valuation report. Staff will also be on the lookout for possible misuse of this information and will provide the necessary response and education if warranted.

Strategic Plan Linkage: Goal 1: Trusted stewards – Ensure a well-governed financially sound trust fund. (FY 2022-25 Strategic Plan).

Board Policy Linkage: Board Governance Manual: Section 7F - Benefits and Services Policy - Actuarial Valuations of the Defined Benefit Program.