

# State of California Retiree Health Benefits Program

2022 Experience Review for the Years  
July 1, 2018, to June 30, 2022



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May 21, 2024

The Honorable Malia M. Cohen  
California State Controller  
300 Capitol Mall, Suite 1850  
Sacramento, California 95812

**Re: State of California Retiree Health Benefits Program Experience Study**

Dear Controller Cohen:

At the request of the California State Controller's Office (SCO), Gabriel, Roeder, Smith & Company (GRS) has performed a review of the healthcare related actuarial assumptions and methods used to value the liabilities associated with the retiree healthcare benefits provided to statewide employees through the programs sponsored by the State of California as administered by the California Public Employees Retirement System (CalPERS) and the California Department of Human Resources (CalHR). The primary purpose of the study is to determine the continued appropriateness of the current healthcare related actuarial assumptions by comparing actual experience to expected experience. Our study was based on census and healthcare claims experience used for the annual actuarial valuations from June 30, 2018, to June 30, 2022. The updated actuarial assumptions and methods recommended by this study will first be used for the GASB Statements No. 74 and No. 75 (GASB Nos. 74 and 75) actuarial valuations and full funding actuarial valuations as of June 30, 2023.

Our study includes a review of the experience associated with the following actuarial assumptions:

- Full-Funding discount rate;
- Health cost and premium increases;
- Participation percentage;
- Percent of disabilities treated as post-Medicare;
- Coverage and continuance assumptions;
- Aging factors;
- Aged per capita claim cost based on updated aging factors – medical and prescription;
- Adjustments for disabled members;
- Adjustments for children of current retirees and survivors;
- Per capita claim cost – dental;
- Medicare Part B premiums;
- Employer Group Waiver Plan (EGWP) assumptions;
- Inflation Reduction Act (IRA) trend adjustments; and
- Data processing assumptions.

Section I contains a summary of the actuarial assumptions and methods review. The results of this analysis are set forth in Section II of this report. Section III contains the cost impact as a result of the assumption modifications.

The results of the experience study and recommended healthcare related assumptions set forth in this report are based on the data and actuarial techniques and methods described above. This healthcare related assumption review is based on data provided by the SCO, CalPERS and CalHR for the annual actuarial valuations. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided. 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. Based on these items, we certify these results to be true and correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose stated.

Alex Rivera and Abra D. Hill are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

**Gabriel, Roeder, Smith & Company**



Alex Rivera, FSA, EA, MAAA, FCA  
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## **SECTION I**

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### **EXPERIENCE REVIEW SUMMARY**

# Experience Review Summary

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## Background

The actuarial valuation process for an Other Postemployment Benefits (OPEB) program includes:

- **Pension-related assumptions** used to determine the likelihood that a member who satisfies OPEB eligibility requirements will retire in the future;
- **OPEB-related assumptions** used to: (i) determine the likelihood that a member will elect healthcare coverage at retirement and (ii) project the member's healthcare benefit after retirement;
- **Pension-related and OPEB-related assumptions** used to determine the likelihood that the member will continue to receive healthcare benefits after retirement;
- **Economic assumptions** used to determine the present value of projected healthcare benefits at the valuation date;
- **Cost method** used to allocate costs during the member's active working period;
- **Funding policy** used to determine the level of pay-as-you-go funding contributions and pre-funding contributions;
- **Investment policy and capital market assumptions** used to evaluate the expected long-term return on assets if the program is pre-funded through a dedicated trust;
- **Plan provisions** which define the level of healthcare benefits provided to the retiree net of the retiree's share of premium; and
- **Census data** as of the actuarial valuation date.

Actuarial valuation assumptions and methods along with plan provisions and census data are used to determine expected future benefit payments, actuarial liabilities and normal costs. If the sponsor has adopted an actuarially based pre-funding policy, the actuarial valuation results may also be used to determine actuarially determined contributions.

The Actuarial Standards Board (ASB) provides guidance on measuring the costs of financing a retirement program through the following Actuarial Standards of Practices (ASOP):

- ASOP No. 6, Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions;
- ASOP No. 27, Selection of Economic Assumptions for Measuring Pension Obligations; and
- ASOP No. 35, Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations.

The recommendations provided in this report are consistent with the preceding Actuarial Standards of Practice.

# Experience Review Summary

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## Basis of Actuarial Valuation as of June 30, 2022

The actuarial valuation as of June 30, 2022, for the State of California Retiree Healthcare Benefits Program, reflected the following:

- Census data as of June 30, 2022;
- Plan provisions in effect as of June 30, 2022;
- Pension-related assumptions that were used for the 2022 actuarial valuations of the CalPERS statewide pension programs, which were based on the 2021 CalPERS Experience Study and Review of Actuarial Assumptions;
- OPEB-related assumptions and methods from the OPEB Experience Study for the period from July 1, 2014 to June 30, 2018, including participation assumptions, coverage and continuance assumptions, per capita costs aging factors, and other assumptions relating to disabled members;
- Annual updates to certain OPEB-related assumptions including: per capita claim costs and EGWP costs adjustments, using information provided by the SCO, CalPERS and CalHR, and healthcare trend rates;
- Pre-funding policy in effect as of June 30, 2022, based on legislation in GOV 22940-22944.6, which for certain employee groups provides for the pre-funding of future normal costs. The actuarial valuation as of June 30, 2022, also reflected temporary suspension of member pre-funding contributions under the Personal Leave Program (PLP 2020) and the subsequent reinstatement of member contributions for all employee groups in effect as of June 30, 2022.
- CERBT Investment Policy 1 in effect as of June 30, 2022; and
- GASB Nos. 74 and 75 blended discount rate at June 30, 2022, determined separately for 17 actuarial valuation groups, which generally depends on a projection of actuarial liabilities, assets and the year that pre-funding assets are available to pay benefits.

As of January 1, 2022, the PERS Select, PERS Choice, and PERSCare healthcare plans were replaced with the PERS Platinum and PERS Gold healthcare plans. The Experience Study considers the change to the PERS Platinum and PERS Gold healthcare plans.

The Excise Tax, also known as the Cadillac Tax, was originally scheduled to take effect in 2018. It was delayed twice, most recently until 2022, and is now permanently repealed. The repeal was effective for taxable years beginning after December 31, 2019. Consequently, assumptions which estimate the impact of the Excise Tax were removed starting with the actuarial valuation as of June 30, 2020. The repeal reduced premium rates for fully funded programs by a small marginal amount. The Experience Study does not consider the impact of the Excise Tax repeal since it did not significantly impact the historical actuarial valuation results.

Please refer to the full actuarial valuation report as of June 30, 2022, for additional details on census, plan provision, funding policy, assumptions, and methods used in the most recent actuarial valuations.

# Experience Review Summary

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## Review of Experience and Assumptions and Key Recommendation

Generally accepted actuarial principles require the periodic review of emerging experience against actuarial valuation assumptions in order to recommend updates to the actuarial valuation assumptions.

The report contains an experience review for the period from July 1, 2018, to June 30, 2022, of the OPEB-related actuarial assumptions used for the actuarial valuations of the State of California Retiree Healthcare Benefits program. The pension-related assumptions used for the OPEB actuarial valuation as of June 30, 2022, were based on the 2021 CalPERS Experience Study and Review of Actuarial Assumptions. The OPEB actuarial valuation as of June 30, 2023, will be based on the same set of pension-related assumptions. Updates to pension-related assumptions are performed by CalPERS and will be included in future OPEB actuarial valuations after CalPERS releases their next experience study report.

The recommended actuarial assumptions will be used for the full-funding actuarial valuations and the GASB Nos. 74 and 75 actuarial valuations, effective as of June 30, 2023.

Following is a summary of our key findings and recommendations:

- **Full funding discount rate** – We recommend maintaining the full-funding discount rate of 6.00 percent. We recommend that full-funding policy discount rates be reviewed each year in relation to the rate expected to be earned under Strategy 1 as disclosed by CERBT.
- **General inflation and wage inflation** – We recommend maintaining the price inflation assumption at 2.30 percent. We recommend maintaining the wage inflation assumption at 2.80 percent.
- **Health cost and premium increases** – We continue to recommend the use of a select and ultimate trend assumption and the use of the most recent premium information available at the time of the valuation.
- **Participation election percentage** – We recommend updating these assumptions based on the experience of the plan.
- **Percentage of disabled members eligible for Medicare benefits** – We recommend updating this assumption based on the experience of the plan.
- **Coverage and continuance assumptions** – We recommend updating the assumption based on the experience of the plan.
- **Aging factors** – We recommend updating these factors based on more recent gross claims data.
- **Aged per capita claim cost based on updated aging factors – medical and prescription** – We recommend updating the per capita claims costs based on the recommended aging factors.
- **Adjustments for disabled members** – We recommend maintaining the load applied to the expected claims for disabled members.
- **Adjustments for children of current retirees and survivors** – We recommend updating the load applied to the expected claims to account for children of current retirees and survivors.
- **Per capita claim cost – dental** – We recommend maintaining the current assumption.



# Experience Review Summary

- **Medicare Part B premiums** – We recommend maintaining the current assumption.
- **Employer Group Waiver Plan (EGWP)** – We recommend updating the EGWP trend adjustment factors applied to Medicare claims.
- **Inflation Reduction Act (IRA)** – We recommend updating the trend assumptions applied to Medicare per capita costs and premiums to reflect the potential impact of the IRA.
- **Data processing assumptions** – We recommend reviewing the data each year to determine whether or not certain assumptions need to be made and whether or not those assumptions will have a material impact on the valuation.

The change in OPEB-related actuarial assumption, using the full-funding discount rate assumption, is expected to impact the key results of the actuarial valuation as of June 30, 2022, as follows:

IMPACT OF CHANGE IN ASSUMPTIONS						
FULL-FUNDING ACTUARIAL VALUATION AT JULY 1, 2022 (\$ IN 000'S)						
TOTAL OF ALL ACTUARIAL VALUATION GROUPS						
	Actuarial Accrued Liability		Net Employer ADC for FYE June 30, 2023		Employer PAYGO Costs for FYE June 30, 2023	
Current Assumptions	\$ 67,079,533		\$ 4,644,412		\$ 2,900,024	
Impact due to:						
• Change in Participation, Coverage, Continuance, and Contract Mix	232,213	0.3%	19,131	0.4%	602	0.0%
• Change in Aging, Disability Load, Children Load, and Percent of Future Disabled Members Eligible for Medicare and Part B Premiums	(107,564)	-0.2%	(7,788)	-0.2%	(4,497)	-0.2%
• Change in EGWP/IRA related trend assumption	451,524	0.7%	33,680	0.7%	(2)	0.0%
<b>Total Impact</b>	<b>576,173</b>	<b>0.9%</b>	<b>45,023</b>	<b>1.0%</b>	<b>(3,897)</b>	<b>-0.1%</b>
After Recommended Changes	\$ 67,655,706		\$ 4,689,435		\$ 2,896,127	

Updating the Participation, Coverage, Continuance and Contract Mix assumptions slightly increased the Actuarial Accrued Liability as of June 30, 2022, by approximately \$0.232 billion or 0.35%. This implies that these assumptions, in the aggregate, were consistent with observed experience.

Updating the Aging, Disability Load, Children Load, Medicare Disability, and Part B Premium assumptions slightly decreased the Actuarial Accrued Liability as of June 30, 2022, by approximately \$0.108 billion or 0.16%. Again, this implies that these assumptions, in the aggregate, were consistent with observed experience.

Our historical actuarial valuations assumed a slightly higher trend rate assumption for Medicare coverage when compared to non-Medicare coverage. We used higher trend rates because Medicare benefits include a higher proportion of prescription benefits which are expected to experience higher trend rates when compared to medical benefits. In addition, Medicare trend rates also included a margin of conservatism to offset the potential volatility of the Employer Group Waiver Plan (EGWP).



## Experience Review Summary

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The Inflation Reduction Act (IRA) is expected to shift some prescription costs from the federal EGWP subsidy program and manufacturer subsidies to the plan sponsor. However, the CMS inflation rebate program and negotiated discounts with manufacturers program may dampen trend.

The recommended EGWP/IRA trend factors increased the Actuarial Accrued Liability as of June 30, 2022, by approximately \$0.452 billion or 0.67%.

We recommend monitoring EGWP/IRA related experience during the annual valuation process and adjusting the EGWP/IRA related trend assumption.

Section II contains details on recommended assumption changes due to the Experience Study review.

Section III contains more details on the cost impact of recommended assumption changes.

## **SECTION II**

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### **EXPERIENCE ANALYSIS RESULTS**

# Experience Analysis Results

## Inflation Assumption

By “inflation,” we mean price inflation, as measured by annual increases in the Consumer Price Index (CPI). This inflation assumption underlies most of the other economic assumptions. It has an impact on investment return, salary increases, and overall payroll growth. The current annual inflation assumption is 2.30 percent.

The following table shows the historical average inflation rates over various periods, ending June 2023.

Fiscal Year	Annual Increase in CPI-U
2018-19	1.65%
2019-20	0.65%
2020-21	5.39%
2021-22	9.06%
2022-23	2.97%
3-Year Average	5.78%
5-Year Average	3.90%
10-Year Average	2.71%
20-Year Average	2.57%
25-Year Average	2.54%
30-Year Average	2.52%

Over the five-year period from June 2019 through June 2023, the CPI-U has increased at an average annual rate of 3.90 percent. **However, the assumed inflation rate is only weakly tied to past results.**

## Future Inflation Expectations

Since price inflation is relatively volatile and is subject to a number of influences not based on recent history, economic assumptions are less reliably based on recent past experience than are the demographic assumptions. Therefore, it is important not to give undue weight to recent experience. We must also consider future expectations as well.

One source of information about future inflation is the market for US Treasury bonds. The difference in yield between non-indexed and indexed treasury bonds is generally a reasonable estimate of what the bond market expects on a forward-looking basis for inflation. Based on forward-looking price inflation forecasts from the Federal Reserve Bank of Cleveland, as of December 1, 2023, the difference for 20-year bonds implies that inflation over the next 20 years would average 2.33 percent. The difference in yield for 30-year bonds implies 2.39 percent inflation over the next 30 years.

## Experience Analysis Results

The following tables present a summary of historical inflation rate forecasts from various sources. The Federal Reserve Bank of Cleveland 30-year inflation projections for 12-month periods ending from June 30, 2021, to June 30, 2023, ranged from 2.00 percent to 2.45 percent. The Federal Reserve Bank of St. Louis data is similar and ranged from 2.23 percent to 2.47 percent.

Forward-Looking Price Inflation Forecasts					
Congressional Budget Office	6/30/2021	6/30/2022	6/30/2023	12/31/2023	3/31/2024
5-Year Annual Average	2.18%	3.23%	2.83%	2.83%	2.32%
10-Year Annual Average	2.29%	2.81%	2.57%	2.57%	2.26%
Federal Reserve Bank of Philadelphia					
5-Year Annual Average	2.40%	3.40%	2.50%	2.60%	2.30%
10-Year Annual Average	2.30%	2.80%	2.36%	2.40%	2.24%
Federal Reserve Bank of Cleveland					
10-Year Expectation	1.60%	2.40%	1.75%	2.28%	2.22%
20-Year Expectation	1.82%	2.41%	1.96%	2.33%	2.31%
30-Year Expectation	2.00%	2.45%	2.11%	2.39%	2.39%
Federal Reserve Bank of St. Louis					
10-Year Breakeven Inflation	2.34%	2.62%	2.20%	2.18%	2.31%
20-Year Breakeven Inflation	2.43%	2.78%	2.48%	2.42%	2.45%
30-Year Breakeven Inflation	2.29%	2.47%	2.23%	2.19%	2.27%
U.S. Department of the Treasury					
10-Year Breakeven Inflation	2.36%	2.44%	2.10%	2.09%	2.21%
20-Year Breakeven Inflation	2.39%	2.60%	2.40%	2.37%	2.43%
30-Year Breakeven Inflation	2.41%	2.40%	2.19%	2.19%	2.26%
50-Year Breakeven Inflation	2.45%	2.50%	2.29%	2.29%	2.36%
100-Year Breakeven Inflation	2.48%	2.57%	2.37%	2.36%	2.44%
Social Security Trustees					
Ultimate Intermediate Assumption	2.40%	2.40%	2.40%	2.40%	2.40%

## Experience Analysis Results

Forward-Looking Price Inflation Forecasts <sup>a</sup>	
<b>Congressional Budget Office<sup>b</sup></b>	
5-Year Annual Average	2.83%
10-Year Annual Average	2.57%
<b>Federal Reserve Bank of Philadelphia<sup>c</sup></b>	
5-Year Annual Average	2.60%
10-Year Annual Average	2.40%
<b>Federal Reserve Bank of Cleveland<sup>d</sup></b>	
10-Year Expectation	2.28%
20-Year Expectation	2.33%
30-Year Expectation	2.39%
<b>Federal Reserve Bank of St. Louis<sup>e</sup></b>	
10-Year Breakeven Inflation	2.18%
20-Year Breakeven Inflation	2.42%
30-Year Breakeven Inflation	2.19%
<b>U.S. Department of the Treasury<sup>f</sup></b>	
10-Year Breakeven Inflation	2.09%
20-Year Breakeven Inflation	2.37%
30-Year Breakeven Inflation	2.19%
50-Year Breakeven Inflation	2.29%
100-Year Breakeven Inflation	2.36%
<b>Social Security Trustees<sup>g</sup></b>	
Ultimate Intermediate Assumption	2.40%

<sup>a</sup>End of the Fourth Quarter, 2023. Version 2024-01-25 by Gabriel, Roeder, Smith & Company.

<sup>b</sup>*The Budget and Economic Outlook: 2023 to 2033*, Release Date: February 2023, Consumer Price Index (CPI-U), Percentage Change from Year to Year, 5-Year Annual Average (2023 - 2027), 10-Year Annual Average (2023 - 2032).

<sup>c</sup>*Fourth Quarter 2023 Survey of Professional Forecasters*, Release Date: November 13, 2023, Headline CPI, Annualized Percentage Points, 5-Year Annual Average (2023 - 2027), 10-Year Annual Average (2023 - 2032).

<sup>d</sup>Inflation Expectations, Model output date: December 1, 2023.

<sup>e</sup>The breakeven inflation rate represents a measure of expected inflation derived from X-Year Treasury Constant Maturity Securities and X-Year Treasury Inflation-Indexed Constant Maturity Securities. Observation date: December, 2023.

<sup>f</sup>The Treasury Breakeven Inflation (TBI) Curve, Monthly Average Rates, December, 2023.

<sup>g</sup>*The 2023 Annual Report of The Board of Trustees of The Federal Old-Age And Survivors Insurance and Federal Disability Insurance Trust Funds*, March 31, 2023, p. 10, Key Assumptions and Summary Measures for the Last 65 Years of the Long-Range (75-year) Projection Period, Intermediate, Consumer Price Index (CPI-W).

## Experience Analysis Results

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However, this analysis is known to be imperfect as it ignores the inflation risk premium that buyers of US Treasury bonds often demand as well as possible differences in liquidity between US Treasury bonds and Treasury Inflation Protected Securities (TIPS).

Another point of reference is the Social Security Administration's (SSA) 2023 Trustees Report, in which the Office of the Chief Actuary is projecting a long-term average ultimate annual inflation rate of 2.40 percent under the intermediate cost assumption. The ultimate inflation assumption is 1.80 percent and 3.00 percent respectively in the low cost and high cost projection scenarios. The Social Security Trustees report uses the ultimate rates for their 75-year projections, much longer than the longest horizon we can discern from Treasuries and TIPS.

We also surveyed the inflation assumption used by various investment consulting firms. In our sample of these firms, the inflation assumption ranged from 2.26 percent to 2.90 percent, with an average of 2.52 percent in the short-term (10 years or less) and 2.56 percent in the long-term (20 to 30 years).

### **Recommendation**

Based on this information, our opinion is that it would be reasonable to maintain the current price inflation assumption of 2.30 percent. We caution against lowering the price inflation assumption too low (i.e., below 2.00 percent).

# Experience Analysis Results

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## Full Funding Discount Rate and Investment Return Assumption

The State and most employee groups, other than CSU employees, have agreed to pre-fund retiree healthcare benefits. The State and all active members make contributions into separate accounts for the SEIU employee group, each remaining bargaining unit, the Judicial employee group and the Exempt/Excluded/Executive (EEE) group. Contributions are based on a percentage of pensionable compensation with the ultimate goal of contributing 100 percent of the actuarially determined normal cost shared equally between the State and employees.

Pre-funding contributions and investment income are not available to pay plan benefits until the earlier of 2046 or the year that actuarial accrued liabilities are fully funded. The sponsor also makes pay-as-you-go contributions for benefits paid to current retirees and the portion of benefits paid to future retirees that are not pre-funded.

Pre-funding contributions are currently held in the California Employers' Retiree Benefit Trust (CERBT) and the State has adopted investment Strategy 1. Based on information provided on CalPERS' website, the CERBT Strategy 1 investment portfolio is expected to earn approximately 6.00 percent per year over the long term. As of June 30, 2022, total assets in the CERBT accounts, for the SEIU bargaining group, 12 remaining bargaining units, Judicial employees, and EEE employees are approximately \$5.13 billion.

The investment return assumption is one of the principal assumptions used in the actuarial valuation of a pre-funded retirement plan with appropriate funding and investment policies. It is used to discount future expected benefit payments to the actuarial valuation date in order to determine actuarial liabilities and normal costs of the plan. Currently, the investment return assumption is 6.0 percent, inflation assumption is 2.3 percent, and the real investment return assumption is 3.7 percent.

The long-term rate of return used for the full-funding actuarial valuation depends on the California Employers' Retiree Benefit Trust (CERBT) Fund investment policy recommendation and capital market assumptions. The full-funding actuarial valuation is used to:

1. Determine the year that actuarial liabilities, for each respective valuation group, are projected to be fully funded, and
2. Determine the full-funding normal cost for each respective valuation group.

GRS performed a supplemental review of the long-term rate of return assumption of 6.00 percent used for the full-funding OPEB actuarial valuation as of June 30, 2021. This review was provided in our letter dated March 17, 2023, and was based on the following information:

- *Asset Liability Management: Adoption of Affiliate Funds' Capital Market Assumptions*, presented at the CalPERS Investment Committee Meeting on November 15, 2021, Agenda Item 7(a);
- *Asset Liability Management: Affiliate Funds – Health, Defined Benefit, and Pre-Funding Trusts*, presented at the CalPERS Investment Committee Meeting on March 14, 2022, Agenda Item 7(b); and
- GRS Asset Projection Model and Capital Market Assumptions.



## Experience Analysis Results

The review supports the long-term investment return assumption of 6.00 percent, which was based on an inflation assumption of 2.30 percent. The key highlights of the supplemental review are reproduced below.

### Support of Current Investment Return Assumption

The following table shows the recommended CERBT 1 target asset allocation and the capital market assumptions, as provided by CalPERS Investment Office and CalPERS Actuarial Office, which includes a reduction of 10 basis points for investment administration fees.

Asset Class	Current Target CERBT 1	Geometric Returns Year 1 - 5	Geometric Returns Year 6 - 20	Volatility
Global Equity	49.00%	6.80%	6.80%	17.00%
Fixed Income	23.00%	1.40%	3.70%	8.20%
Real Estate Investment Trusts (REITs)	5.00%	0.60%	2.80%	5.90%
Treasury Inflation Protected Securities (TIPS)	20.00%	5.40%	6.00%	18.70%
Commodities	3.00%	3.20%	3.40%	15.30%
<b>Total</b>	<b>100.00%</b>			
<b>Inflation</b>		<b>2.40%</b>	<b>2.30%</b>	

We applied the CERBT 1 target asset allocation and CalPERS capital market assumptions to our asset return projection model for calendar year end 2021, and generated the following results for the aggregate portfolio:

	Geometric Returns Year 1 - 5	Geometric Returns Year 6 - 20	Weighted Returns
Expected Geometric Return	5.23%	6.00%	5.81%
Volatility	11.95%	11.95%	11.95%
60 <sup>th</sup> Percentile Return	5.45%	6.64%	6.45%
50 <sup>th</sup> Percentile Return	5.10%	5.96%	5.78%
40 <sup>th</sup> Percentile Return	4.89%	5.30%	5.11%
<b>Inflation</b>	<b>2.40%</b>	<b>2.30%</b>	

Based on CERBT 1 target asset allocation, CalPERS capital market assumption, and our asset return projection model, the likelihood that plan assets will earn at least 6.00 percent per year in the long-term, with a long-term inflation assumption of 2.30 percent, was approximately 47 percent. This conclusion



## Experience Analysis Results

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supported a full-funding discount rate of 6.00 percent for the actuarial valuation as of July 1, 2021. This assumption was also used for the actuarial valuation as of June 30, 2022.

### Updated Capital Market Assumptions

The following table shows the recommended CERBT 1 target asset allocation as provided in the CERBT Strategy 1 Fund Facts Sheet dated March 31, 2024, which is the same target allocation used for the review applicable for the actuarial valuation as of June 30, 2021.

Asset Class	Current Target
Global Equity	49.00%
Fixed Income	23.00%
Treasury Inflation Protected Securities (TIPS)	5.00%
Real Estate Investment Trusts (REITs)	20.00%
Commodities	3.00%
<b>Total</b>	<b>100.00%</b>

We applied the preceding CERBT target asset allocation and GRS updated capital market assumptions for calendar 2023 to the GRS asset projection model. Capital market assumptions were based on a sample from twelve nationally known investment consulting firms. Eleven firms provided capital market expectations for shorter time horizons (10 years or less). Seven of the investment consulting firms provided capital market expectations for longer time horizons (20 to 30 years).

These investment consulting firms periodically issue reports that describe their capital market assumptions; that is, their estimates of expected returns, volatility and correlations among the different asset classes. While some of these assumptions may be based upon historical analysis, many of these firms also incorporate forward-looking adjustments to better reflect near-term and long-term expectations. The estimates for core investments (i.e., fixed income, equities, and real estate) are generally based on anticipated returns produced by passive index funds.

# Experience Analysis Results

The updated capital market assumptions produced the following average projected returns:

	Geometric Returns Year 1 - 10	Geometric Returns Year 1 - 20	Weighted Returns
Expected Geometric Return	6.26%	6.44%	6.39%
Volatility	11.06%	10.98%	11.00%
60 <sup>th</sup> Percentile Return	7.09%	7.03%	7.04%
50 <sup>th</sup> Percentile Return	6.21%	6.41%	6.36%
40 <sup>th</sup> Percentile Return	5.33%	5.79%	5.68%
<b>Inflation</b>	<b>2.30%</b>	<b>2.30%</b>	

Based on this analysis, the likelihood asset return exceeds 6.0 percent per year over the next 20 years is approximately 57 percent. Please note that the capital market assumptions for calendar year 2023 are more optimistic when compared to those for calendar year 2021.

## Recommendation

Based on our analysis of the expected investment return and the current target asset allocation, we recommend maintaining the investment return assumption at 6.00 percent for the actuarial valuation as of June 30, 2023, which reflects an inflation assumption of 2.30 percent, and a 10 basis point reduction for CERBT fees. We also recommend updating the investment return assumption and other economic assumptions after CalPERS has completed their next experience study.

We recommend that the assumed investment return be monitored for continued appropriateness between experience reviews as part of the annual actuarial valuation review process. Also, any significant changes in the target asset allocation of the CERBT may warrant an additional review of the rate of return assumption.

**We believe that this assumption can be supported by the Actuarial Standard of Practice No. 27. Under the Standard, all economic assumptions must be selected to be consistent with the purpose of the measurement.**

## Wage Inflation

Since the recommended general inflation assumption is maintained at 2.30 percent, we recommend maintaining the wage inflation assumption at 2.80 percent.

# Experience Analysis Results

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## Health Cost and Premium Increases

Healthcare cost and premium increases are used to model the rate of increase, over time, of the underlying healthcare benefit payments and is often referred to as the healthcare trend rate.

According to Actuarial Standard of Practice No. 6 (ASOP No. 6) section 3.12.1(a):

*Health care cost trend rates reflect the change in per capita health costs over time due to factors such as inflation, medical inflation, utilization, technology improvements, definition of covered charges, leveraging caused by health plan design features not explicitly modeled, and health plan participation. The actuary should not reflect aging of the covered population when selecting the trend assumption for projecting future costs (see section 3.7.7 for a discussion of “age-specific costs”). The actuary should consider separate trend rates for major cost components such as hospital, prescription drugs, other medical services, Medicare integration, and administrative expenses. Even if the actuary develops one aggregate set of trend rates, the actuary should consider these cost components when developing the aggregate set of trend rates.*

*When developing an initial trend assumption, the actuary should consider known or expected changes in per capita health costs in the year(s) following the measurement date. The actuary should consider the sustainability of current trends over an extended period, and the possible need for a long-term trend assumption that is different from the initial trend assumption. If these two trend assumptions are different, the actuary should choose an appropriate select period and transition pattern between the initial trend assumption and the long-term trend assumption.*

*When developing a long-term trend assumption and the select period for transitioning, the actuary should consider relevant long-term economic factors such as projected growth in per capita gross domestic product (GDP), projected long-term wage inflation, and projected health care expenditures as a percentage of GDP. The actuary should select a transition pattern and select period that reasonably reflects anticipated experience.*

The healthcare trend rates for medical and prescription costs are currently based on a select and ultimate approach meaning higher rates of increase are assumed in the initial years until an ultimate increase rate is reached in the later years. Separate trend rates were considered for pre-Medicare medical/Rx costs, post-Medicare medical/Rx costs, and dental costs.

Covid-19 significantly impacted recent medical costs experience and historical trend rates. That is, costs during 2020 were lower than expected, costs during 2021 were higher than expected, and costs during 2022 were more or less back to expected levels. Covid-19 did not significantly impact prescription cost experience.

Excluding the effects of Covid-19, historical prescription costs experienced higher trend rates when compared to medical costs. On average, prescription benefits annual trend rates were two to three percentage points higher than medical trend rates.

The historical Medicare trend rates used in the actuarial valuations reflected the potential volatility of the Employer Group Waiver Plan (“EGWP”) subsidies on the net cost of prescription benefits. That is, our



## Experience Analysis Results

historical valuation model assumed a portion of CMS EGWP prescription subsidies would be reduced in the future. The relative reduction in EGWP subsidies was estimated by slightly increasing the Medicare trend rates to achieve an ultimate EGWP subsidy savings factor. The following exhibit shows the historical estimated EGWP savings, estimated PBM rebates, and ultimate savings factor.

Medicare Per Member Per Month (PMPM) Costs	Platinum/ Gold	PERSCare			PERS Choice/Select		
	2023	2022	2021	2019	2022	2021	2019
Rx Gross Cost PMPM	\$ 528.58	\$ 452.19	\$ 429.50	\$ 387.43	\$ 432.25	\$ 412.53	\$ 380.89
PBM Rx rebates and EGWP subsidies	\$ (258.20)	\$ (183.13)	\$ (162.30)	\$ (124.26)	\$ (198.63)	\$ (175.00)	\$ (138.23)
Net Rx costs	\$ 270.38	\$ 269.06	\$ 267.20	\$ 263.17	\$ 233.62	\$ 237.52	\$ 242.67
Rebates and EGWP savings as percentage of Rx costs	48.8%	40.5%	37.8%	32.1%	46.0%	42.4%	36.3%
Total Medical and Rx Costs PMPM before subsidies	\$ 770.97	\$ 673.55	\$ 657.50	\$ 616.34	\$ 632.92	\$ 613.71	\$ 580.07
Net Medical and Rx Costs	\$ 512.77	\$ 490.43	\$ 495.19	\$ 492.08	\$ 434.29	\$ 438.70	\$ 441.84
PBM rebates and EGWP subsidies as a percentage of total costs	33.5%	27.2%	24.7%	20.2%	31.4%	28.5%	23.8%
Assumed Long-term Ultimate Savings	30%	20%	14%	9%	24%	17%	12%
Period to Reach Ultimate Savings	8	9	6	8	9	6	8

In general, net prescription costs for Medicare members have decreased due to increased PBM efficiency and rebates and EGWP subsidies relative to gross costs. However, this trend may be dampened after considering the effects of the Inflation Reduction Act (IRA).

Current blended medical/Rx trend rates reflect the expected proportion of medical to prescription costs between non-Medicare and Medicare coverage. Medicare trend rates are higher than non-Medicare trend rates because Medicare costs include a higher proportion of prescription benefits, prescription trend is higher than medical trend. In addition, Medicare trend rates assume the ultimate relative EGWP subsidy will be reduced slightly in the future.

The proposed blended trend rates reflect EGWP and the potential impact of IRA on Medicare prescription benefits including:

- The member’s maximum True Out Of Pocket (TrOOP) cost is \$8,000 for 2024; however, the member’s actual out of pocket costs will generally range from \$2,000 to \$3,500 depending on the type and level of prescribed drugs and the mix of brand and generic drugs. IRA reduces the Member’s Out Of Pocket (MOOP) cost to \$2,000 for 2025.
- In the 2024 Coverage Gap range – from \$5,030 to \$12,447 – the Plan, Member, and Manufacturer pay 5%, 25%, and 70%, respectively, of brand drug costs.
- In the 2025 Standard Coverage Phase – from \$590 to \$6,230 – the Plan, Member, and Manufacturer pay 65%, 25%, and 10%, respectively, of brand drug costs.
- In the 2024 Catastrophic Phase – over \$12,447 – the Plan pays 20% of all drug cost and CMS Federal Reinsurance pays 80% of all drug costs.



## Experience Analysis Results

- In the 2025 Catastrophic Phase – over \$6,230 – the Plan pays 60% of all plan cost, CMS pays 40% of generic drug costs and 20% of brand drug cost, and manufacturers pay 20% of brand drug costs.
- In 2025, CMS will invoice manufacturers for certain inflation rebates, if manufacturer increases for certain drugs increase at a rate higher than inflation.
- In 2026 federal government will start negotiating with manufactures price reduction on certain high cost brand name drugs.

IRA is expected to shift a portion of Medicare prescription costs from CMS and manufacturers to the plan sponsor. However, trend rates could be dampened based on the CMS inflation rebate program and negotiated discounts with manufacturers.

We recommend increasing trend rates for plan year 2025 to reflect the changes in the Standard Coverage Phase and Catastrophic Phase. We also recommend adjusting trend rates after 2025 to reflect the CMS inflation rebates and negotiated discounts.

The following exhibits shows the current assumed healthcare trend rates as of the most recent actuarial valuation and the proposed healthcare trend rates applied to per capita costs and premium rates.

Year	Per Capita Claim Costs Effective Trend With EGWP/IRA Adjustments			
	Platinum/ Gold		HMO	
	Current	Proposed	Current	Proposed
2023	7.21%	7.21%	-2.17%	-2.17%
2024	8.06%	16.56%	7.93%	13.64%
2025	7.41%	6.95%	7.30%	6.65%
2026	6.76%	6.40%	6.67%	6.14%
2027	6.10%	5.86%	6.03%	5.62%
2028	5.45%	5.31%	5.40%	5.11%
2029	4.80%	4.77%	4.77%	4.59%
2030	4.65%	4.72%	4.63%	4.58%
2031	4.50%	4.68%	4.50%	4.56%
2032	4.50%	4.63%	4.50%	4.55%
2033	4.50%	4.59%	4.50%	4.53%
2034	4.50%	4.54%	4.50%	4.52%
2035-2037	4.50%	4.50%	4.50%	4.50%
2038 and Beyond	4.25%	4.25%	4.25%	4.25%
Ultimate Savings	30%	25%	11%	8%

## Experience Analysis Results

Year	Premium Effective Trend with EGWP/IRA Adjustment			
	Platinum/ Gold		HMO	
	Current	Proposed	Current	Proposed
2023	8.70%	8.70%	-3.25%	-3.25%
2024	7.00%	15.50%	7.00%	12.71%
2025	6.50%	6.04%	6.50%	5.85%
2026	6.00%	5.65%	6.00%	5.47%
2027	5.50%	5.25%	5.50%	5.09%
2028	5.00%	4.86%	5.00%	4.71%
2029	4.50%	4.47%	4.50%	4.33%
2030	4.50%	4.57%	4.50%	4.44%
2031	4.50%	4.68%	4.50%	4.56%
2032	4.50%	4.63%	4.50%	4.55%
2033	4.50%	4.59%	4.50%	4.53%
2034	4.50%	4.54%	4.50%	4.52%
2035-2037	4.50%	4.50%	4.50%	4.50%
2038 and Beyond	4.25%	4.25%	4.25%	4.25%

We recommend no changes to dental and Part B trend rates. We recommend no change to the Statutory Cap trend rate applicable to the 100/90 formula and a change to the assumed trend rate to the Statutory Cap applicable to the 80/80 formula for Medicare to be consistent with proposed premium trend rates.

Each year as part of the valuation process, the trend rates are updated based on a review of supporting documentation provided by CalPERS and a review of various publicly available trend studies. We continue to recommend the use of a select and ultimate trend assumption and the use of the most recent premium information available at the time of the valuation. Trend rates for the upcoming June 30, 2023, valuation will be reviewed based on experience available through calendar year 2023.

# Experience Analysis Results

## Participation Percentage

We have reviewed the participation assumption, or the likelihood that an active member will retire and select healthcare coverage. This assumption generally depends on the subsidy provided by the employer. That is, the higher the level of employer benefits, and the lower the level of retiree-paid premium, the higher the likelihood the retired member will select healthcare coverage.

The following table shows the current participation assumption:

Employer Contribution Percentage of Premium	Participation Rate for Retirees with Healthcare Coverage While Active	Participation Rate for Retirees without Healthcare Coverage While Active
less than 50%	67%	12%
50% to 75%	91%	15%
75% to 90%	96%	20%
90% to 100%	98%	40%

Currently, it is assumed that the participation is higher at retirement if the member had coverage while they were an active employee versus if they waived coverage as an active employee.

In order to develop the participation assumption, we compiled historical valuation data and analyzed the actual number of new retirees that elect coverage at retirement in relation to the employer contribution for which they are eligible.



## Experience Analysis Results

The next two tables present experience for new retirees, who were covered while active and continue coverage at retirement, broken out by:

- Year of retirement; and
- Percent of premium paid by employer.

Overall participation for this group over the last five years was over 95 percent.

New Retirees Who Were Covered While Active - Overall Participation Experience			
Year	Total Number of New Retirees	Total Number of New Retirees Electing Coverage	Actual Participation Rate
2019	8,994	8,562	95.2%
2020	9,592	9,216	96.1%
2021	11,378	10,893	95.7%
2022	<u>9,864</u>	<u>9,278</u>	<u>94.1%</u>
<b>Total</b>	<b>39,828</b>	<b>37,949</b>	<b>95.3%</b>

New Retirees Who Were Covered While Active - Overall Participation Experience					
Employer Contribution Percent of Premium	Total Number of New Retirees	Total Number of New Retirees Electing Coverage	Actual Participation Rate	Current Participation Rate Assumption	Proposed Participation Rate Assumption
less than 50%	1,283	556	43.3%	67.0%	55.0%
50% to 60%	1,898	1,645	86.7%	91.0%	88.0%
60% to 70%	1,318	1,183	89.8%	91.0%	90.0%
70% to 80%	1,161	1,080	93.0%	93.5%	93.0%
80% to 90%	1,197	1,145	95.7%	96.0%	96.0%
90% to 100%	<u>32,971</u>	<u>32,340</u>	<u>98.1%</u>	<u>98.0%</u>	<u>98.0%</u>
<b>Total</b>	<b>39,828</b>	<b>37,949</b>	<b>95.3%</b>	<b>96.2%</b>	<b>95.7%</b>

The proposed participation assumption is slightly lower than the current participation assumption. Therefore, fewer members who were covered as actives will be assumed to participate as retirees under the proposed assumption.

## Experience Analysis Results

The next two tables present experience for new retirees, who were not covered while active and elect coverage at retirement, broken out by:

- Year of retirement; and
- Percent of premium paid by employer.

Overall participation for this group over the last five years was approximately 28 percent.

New Retirees Who Were Not Covered While Active - Overall Participation Experience			
Year	Total Number of New Retirees	Total Number of New Retirees Electing Coverage	Actual Participation Rate
2019	1,514	388	25.6%
2020	1,634	415	25.4%
2021	2,042	615	30.1%
2022	<u>1,894</u>	<u>566</u>	<u>29.9%</u>
<b>Total</b>	<b>7,084</b>	<b>1,984</b>	<b>28.0%</b>

New Retirees Who Were Not Covered While Active - Overall Participation Experience					
Employer Contribution Percent of Premium	Total Number of New Retirees	Total Number of New Retirees Electing Coverage	Actual Participation Rate	Current Participation Rate Assumption	Proposed Participation Rate Assumption
less than 50%	653	13	2.0%	12.0%	7.0%
50% to 60%	474	40	8.4%	15.0%	10.0%
60% to 70%	377	41	10.9%	15.0%	12.0%
70% to 80%	297	30	10.1%	17.5%	14.0%
80% to 90%	306	50	16.3%	20.0%	18.0%
90% to 100%	<u>4,977</u>	<u>1,810</u>	<u>36.4%</u>	<u>40.0%</u>	<u>38.0%</u>
<b>Total</b>	<b>7,084</b>	<b>1,984</b>	<b>28.0%</b>	<b>32.6%</b>	<b>30.0%</b>

The proposed participation assumption is lower than the current participation assumption. Therefore, fewer members who were not covered while active will be assumed to participate as retirees under the proposed assumption.

# Experience Analysis Results

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## **Additional Participation Assumption for California State University**

Effective as of June 30, 2021, for the California State University actuarial valuation group, 25 percent of members with zero pension service as of the actuarial valuation date are assumed to be promoted to an OPEB eligible position in the future.

In order to analyze this assumption, we reviewed the number of CSU active members who had zero years of pension service as of June 30, 2018. Ideally, we would review the data over a longer period.

Of the 7,347 active CSU employees who had zero years of service as of the June 30, 2018 actuarial valuation, 17 percent either had an increase in service during the period from July 1, 2018 to June 30, 2022 or retired receiving OPEB benefits during the period from July 1, 2018 to June 30, 2022. This included some retirees who had zero years of service as an active and over 20 years as a retiree in the following year's actuarial valuation (with OPEB benefits).

Therefore, we recommend maintaining the assumption that 25 percent of members with zero pension service as of the actuarial valuation date will be eligible for OPEB benefits in the future. We also recommend keeping track of CSU members with zero service and updating the assumption during the next Experience Study.

# Experience Analysis Results

## Percent of Disabilities Treated as Post-Medicare

Some disabled members who are under the age of 65 are eligible for Medicare coverage. Currently it is assumed that 4 percent of Public Safety disabilities and 33 percent of all other disabilities are assumed to be eligible for Medicare.

In order to analyze this assumption, we reviewed the number of disabled members who are under the age of 65 that are currently receiving coverage under Medicare. The following table summarizes the results of the analysis:

Public Safety			
Year	Total Number Disabled Under the Age of 65	Number Currently Medicare Eligible	Percent Medicare Eligible
2019	9,003	331	3.7%
2020	8,906	322	3.6%
2021	8,880	309	3.5%
2022	<u>8,688</u>	<u>284</u>	<u>3.3%</u>
<b>Total</b>	<b>35,477</b>	<b>1,246</b>	<b>3.5%</b>

Non Public Safety			
Year	Total Number Disabled Under the Age of 65	Number Currently Medicare Eligible	Percent Medicare Eligible
2019	5,073	1,757	34.6%
2020	4,762	1,714	36.0%
2021	4,420	1,562	35.3%
2022	<u>4,017</u>	<u>1,426</u>	<u>35.5%</u>
<b>Total</b>	<b>18,272</b>	<b>6,459</b>	<b>35.3%</b>

As shown, approximately 3.5 percent of public safety and 35.3 percent of non-public safety disabled members under the age of 65 are currently receiving Medicare coverage.

Therefore, we recommend that 4 percent of Public Safety disabilities and 35 percent of all other disabilities are assumed to be eligible for Medicare coverage.

# Experience Analysis Results

## Coverage and Continuance Assumptions

Currently, it is assumed that 40 percent of participating members will elect one-party coverage, while 60 percent will elect two-party coverage. Of the members electing two-party coverage, we assumed that 100 percent of surviving spouses would continue coverage after the death of the retiree.

In order to analyze this assumption, we reviewed the coverage election data for new retirees over the past five years. The following table shows the actual coverage election percentages:

Coverage Type	Total Number of New Retirees	Actual Coverage Type Rate	Proposed Coverage Type Rate
Single	14,325	35.9%	37.5%
Two Person	<u>25,608</u>	<u>64.1%</u>	<u>62.5%</u>
Total	<b>39,933</b>	<b>100%</b>	<b>100%</b>

As shown, the actual coverage election percentage was 36 percent of participating members elect one-party coverage, while 64 percent will elect two-party coverage. Therefore, we recommend updating the assumption that 37.5 percent of participating members elect one-party coverage, while 62.5 percent will elect two-party coverage.

The data that is collected for the valuation does not contain enough information to analyze the continuation assumption. But, based on the fact that overall participation is very high and the generous State contribution, it is reasonable to assume that 100 percent of surviving spouses would continue coverage after the death of the retiree. We recommend maintaining this assumption.

# Experience Analysis Results

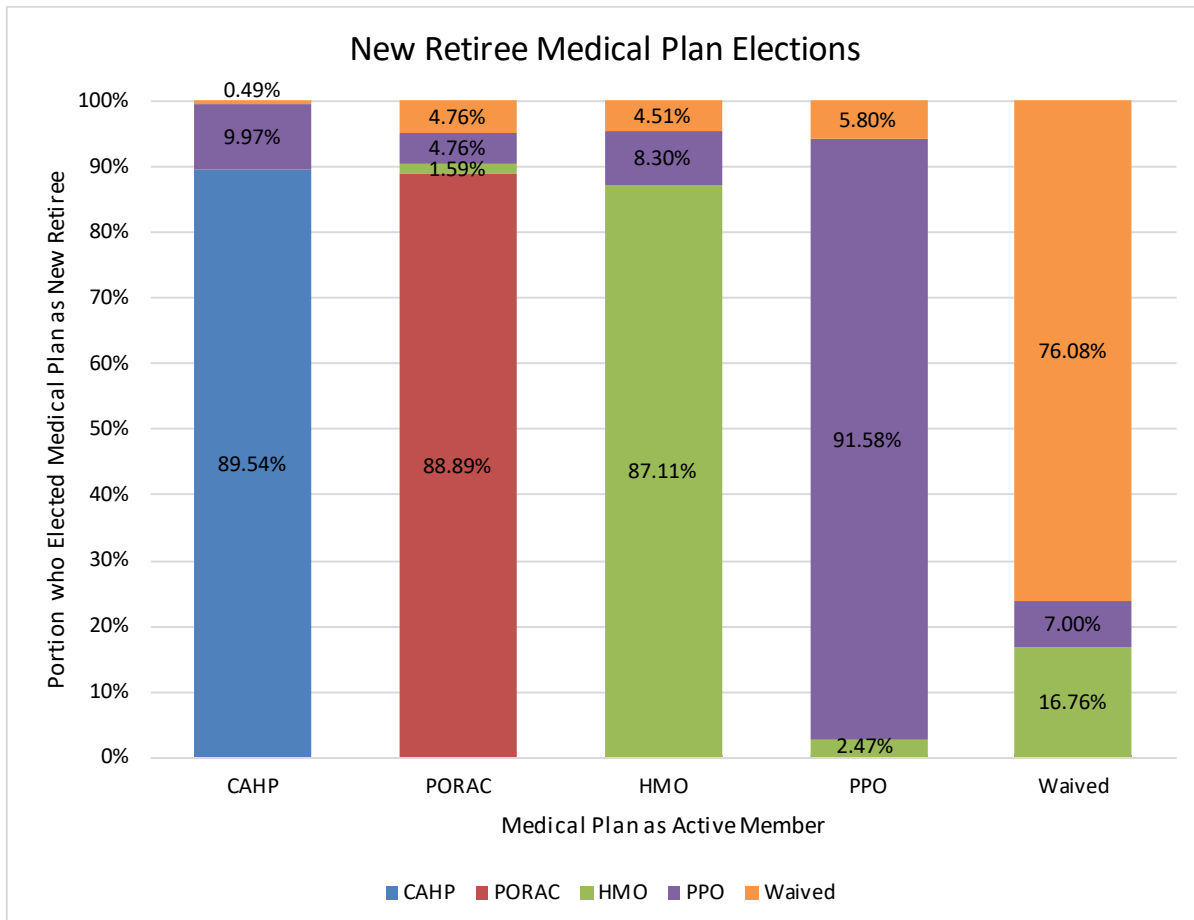
## Contract Mix

Active members are assumed to elect the same healthcare plan type at retirement that they currently have as an active employee. Active members who have waived coverage as of the actuarial valuation date are assumed to elect an HMO plan at retirement.

The table below show the contract mix of actives as of June 30, 2022:

Active Members as of June 30, 2022	
Medical Plan Type	Current Contract Mix
CAHP	2.0%
HMO	63.1%
PERS Gold	8.2%
PERS Platinum	7.1%
PORAC	0.2%
Waived	19.4%

The chart below shows the medical plan elections of new retirees from July 1, 2018 to June 30, 2022 who were active in the prior valuation.



## Experience Analysis Results

Medical Plan as Active	Medical Plan as Retiree					
	CAHP	PORAC	HMO	PPO	Waived	Total
CAHP	89.54%	0.00%	0.00%	9.97%	0.49%	100.00%
PORAC	0.00%	88.89%	1.59%	4.76%	4.76%	100.00%
HMO	0.01%	0.06%	87.11%	8.30%	4.51%	100.00%
PPO	0.00%	0.15%	2.47%	91.58%	5.80%	100.00%
Waived	0.08%	0.08%	16.76%	7.00%	76.08%	100.00%

Current retirees are assumed to continue coverage under the current healthcare plan as of the actuarial valuation date.

Retirees as of June 30, 2022	
Medical Plan	% of Members with Health Coverage Electing Plan
Anthem Blue Cross	1.9%
Blue Shield	3.3%
Health Net	0.2%
Kaiser	33.4%
Kaiser Out-of-State	0.7%
Sharp	0.3%
UnitedHealthcare	12.1%
PERS Gold	1.5%
PERS Platinum	41.3%
CAHP	2.6%
CCPOA	2.2%
PORAC	0.2%
Western Health	0.4%

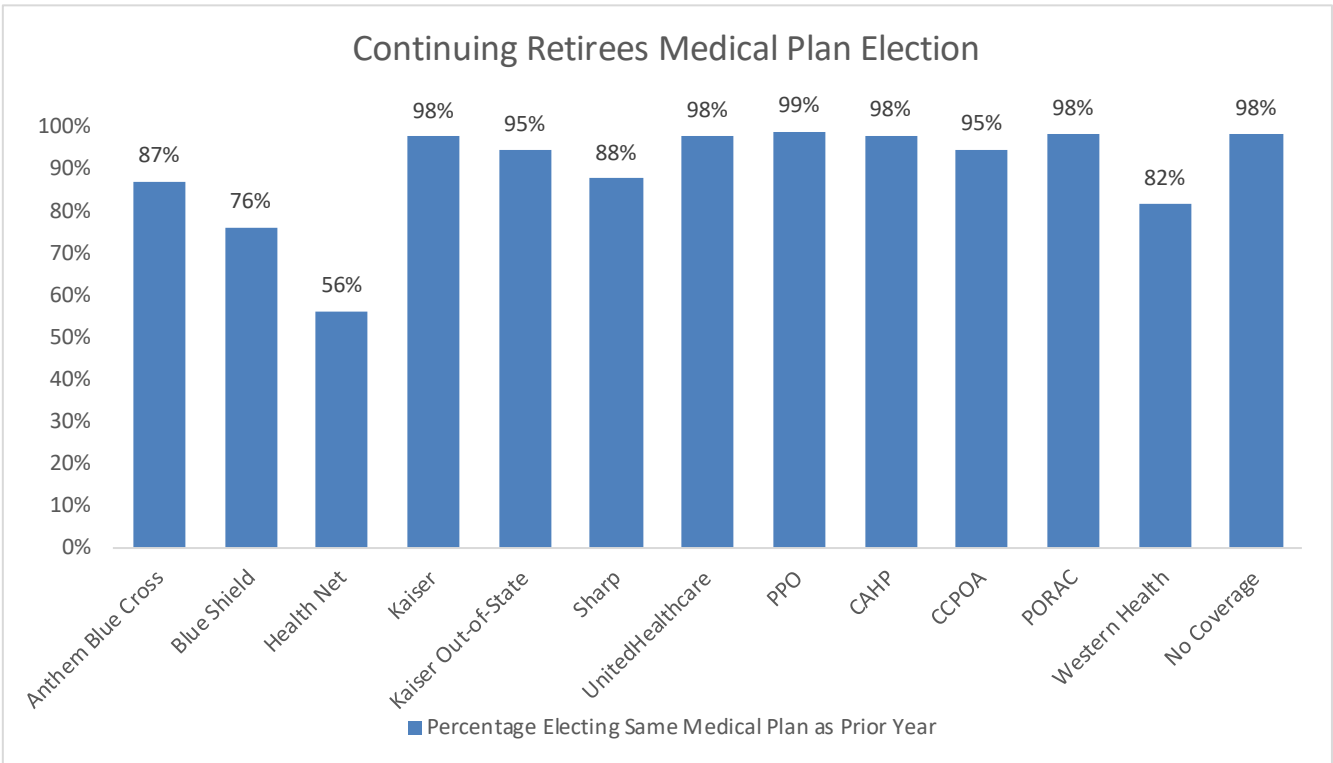
The table and graph on the following page show the medical plan elections of continuing retirees during the period July 1, 2018 to June 30, 2022.

The analysis of continuing retirees is for all retirees and beneficiaries with medical coverage. We also reviewed the medical plan elections as members move from non-Medicare medical plans to Medicare medical plans. A majority of the members continue to elect coverage in the same medical plan once they reach Medicare eligibility. The Anthem Blue Cross and the Health Net plans do not offer Medicare only plans. Upon becoming eligible for Medicare, a majority of the members elect coverage in a UnitedHealthcare Plan (which is consistent with our current assumption for these two plans).

As of the June 30, 2022 actuarial valuation, the valuation assumes a PERS Platinum to PERS Gold enrollment mix for future retirees of 60 percent to 40 percent for Basic coverage and 90 percent to 10 percent for Medicare coverage.

# Experience Analysis Results

Continuing Retirees														
Medical Plan Prior Valuation	Medical Plan Current Valuation													
	Anthem			Kaiser				Western				No	Total	
	Blue Cross	Blue Shield	Health Net	Kaiser	Out-of-State	Sharp	UnitedHealthcare	PPO	CAHP	CCPOA	PORAC	Health		Coverage
Anthem Blue Cross	87%	2%	0%	1%	0%	0%	3%	6%	0%	0%	0%	0%	0%	100%
Blue Shield	5%	76%	2%	1%	0%	0%	7%	7%	0%	0%	0%	1%	1%	100%
Health Net	7%	6%	56%	3%	0%	0%	14%	7%	0%	0%	0%	4%	1%	100%
Kaiser	0%	0%	0%	98%	0%	0%	0%	1%	0%	0%	0%	0%	0%	100%
Kaiser Out-of-State	0%	0%	0%	2%	95%	0%	1%	2%	0%	0%	0%	0%	1%	100%
Sharp	0%	0%	0%	2%	0%	88%	3%	6%	0%	0%	0%	0%	1%	100%
UnitedHealthcare	0%	0%	0%	0%	0%	0%	98%	1%	0%	0%	0%	0%	0%	100%
PPO	0%	0%	0%	0%	0%	0%	0%	99%	0%	0%	0%	0%	0%	100%
CAHP	0%	0%	0%	0%	0%	0%	0%	2%	98%	0%	0%	0%	0%	100%
CCPOA	0%	0%	0%	0%	0%	0%	0%	4%	0%	95%	0%	0%	0%	100%
PORAC	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	98%	0%	0%	100%
Western Health	3%	1%	0%	1%	0%	0%	7%	5%	0%	0%	0%	82%	0%	100%
No Coverage	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	98%	100%



We recommend maintaining this assumption for actives and retirees.



# Experience Analysis Results

## Age/Gender Factors

In any given year, the cost of medical and prescription drug benefits vary by age. As the ages of employees and retirees in the covered population increase so do the cost of benefits. Morbidity tables are employed to develop Per Capita Costs at every relevant age. The following table shows the current aging factors used in the most recent actuarial valuation and represents the percent by which the cost of benefits for non-disabled lives at one age is higher than the cost for the previous age. For example, according to the following table, the cost of medical benefits for a male in the PPO plan age 55 is 2.58 percent higher than for one age 54. These percentages below are separate from the annual Medical Trend, which operates to increase costs independent of and in addition to the Aging Factors shown below.

Sample Ages	Cost Increase by Age					
	Medical - PPO		Rx - PPO		HMO	
	Male	Female	Male	Female	Male	Female
45	2.65%	2.24%	3.58%	3.83%	3.21%	1.58%
50	2.63%	2.18%	2.85%	2.96%	3.14%	1.67%
55	2.58%	2.12%	2.32%	2.35%	3.20%	1.90%
60	2.51%	2.06%	1.93%	1.90%	2.88%	1.98%
65	2.43%	1.99%	1.62%	1.55%	2.65%	1.89%
70	2.35%	1.92%	1.36%	1.26%	2.48%	1.85%
75	2.26%	1.86%	1.15%	1.02%	2.33%	1.82%
80	2.17%	1.79%	0.97%	0.81%	2.21%	1.79%
85	2.09%	1.73%	0.81%	0.62%	2.10%	1.76%
90	2.01%	1.67%	0.67%	0.45%	2.00%	1.73%

We have developed updated aging factors for the PPO medical and prescription drug plans based on gross claim and enrollment experience data broken out by five-year age bands, for calendar years 2018 through 2022. Average gross costs were developed by gender at each age interval for each respective calendar year. These costs were weighted, smoothed, and the average increase at each age was estimated using interpolation formulas. Aging factors for the HMO are the same as the current HMO aging factors.

## Experience Analysis Results

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The table below shows the updated aging factors.

Sample Ages	Cost Increase by Age					
	Medical - PPO		Rx - PPO		HMO	
	Male	Female	Male	Female	Male	Female
45	2.41%	2.10%	3.82%	3.71%	3.21%	1.58%
50	2.37%	2.03%	3.08%	2.93%	3.14%	1.67%
55	2.32%	1.96%	2.56%	2.37%	3.20%	1.90%
60	2.25%	1.90%	2.16%	1.95%	2.88%	1.98%
65	2.18%	1.83%	1.86%	1.63%	2.65%	1.89%
70	2.11%	1.77%	1.62%	1.37%	2.48%	1.85%
75	2.04%	1.71%	1.42%	1.15%	2.33%	1.82%
80	1.96%	1.65%	1.25%	0.96%	2.21%	1.79%
85	1.89%	1.60%	1.11%	0.79%	2.10%	1.76%
90	1.83%	1.54%	0.98%	0.65%	2.00%	1.73%

Generally speaking, the change in aging factors produced higher claims amounts for males and lower claims amounts for females. Details on the actual impact to the aged per capita claims costs are shown on the following pages.

## Experience Analysis Results

### Aged Per Capita Claim Costs Based on Updated Aging Factors – Medical and Prescription

Per capita claims costs were developed separately for PERS Gold, PERS Platinum, and the HMO plans. Costs for the PERS Gold and PERS Platinum plans were based on paid and incurred experience and enrollment information. Costs for the HMO plans were based on the aggregate premium and enrollment data for active and retired members. Per capita claim costs for the two PPO Association Plans (CAHP and PORAC) were based on average costs for the HMO plans multiplied by the ratio of the single premium rate for the PPO Association Plans and the average single premium rate of the HMO plans.

As a result of the updated aging factors, the average costs used in the most recent valuation for each respective plan would change as follows:

Costs for Retirees and Spouses Expected Monthly Per Capita Costs						
PERS Gold - PPO						
Medical						
Age	Male			Female		
	Current	Proposed	Change	Current	Proposed	Change
50	\$668.44	\$680.63	1.8%	\$668.44	\$680.63	1.8%
55	761.07	765.35	0.6%	744.68	752.67	1.1%
60	864.49	858.27	-0.7%	827.10	829.56	0.3%
65	175.08	175.62	0.3%	163.81	166.82	1.8%
70	197.44	195.63	-0.9%	180.76	182.67	1.1%
75	221.73	217.14	-2.1%	198.81	199.42	0.3%
80	247.94	240.15	-3.1%	217.96	217.05	-0.4%
Prescription						
Age	Male			Female		
	Current	Proposed	Change	Current	Proposed	Change
50	\$219.42	\$216.93	-1.1%	\$219.42	\$216.93	-1.1%
55	252.47	252.47	0.0%	253.85	250.58	-1.3%
60	283.17	286.41	1.1%	285.14	281.71	-1.2%
65	234.20	235.90	0.7%	235.51	229.66	-2.5%
70	253.75	258.67	1.9%	254.29	249.00	-2.1%
75	271.54	280.26	3.2%	270.70	266.48	-1.6%
80	287.56	300.69	4.6%	284.73	282.11	-0.9%

## Experience Analysis Results

Costs for Retirees and Spouses Expected Monthly Per Capita Costs						
Age	PERS Platinum - PPO Medical					
	Male			Female		
	Current	Proposed	Change	Current	Proposed	Change
50	\$792.58	\$812.16	2.5%	\$792.58	\$812.16	2.5%
55	902.42	913.25	1.2%	882.99	898.11	1.7%
60	1,025.04	1,024.12	-0.1%	980.70	989.87	0.9%
65	177.18	179.43	1.3%	165.77	170.44	2.8%
70	199.81	199.87	0.0%	182.92	186.64	2.0%
75	224.39	221.85	-1.1%	201.19	203.75	1.3%
80	250.92	245.36	-2.2%	220.58	221.76	0.5%
Age	Prescription					
	Male			Female		
	Current	Proposed	Change	Current	Proposed	Change
50	\$273.95	\$269.83	-1.5%	\$273.95	\$269.83	-1.5%
55	315.22	314.03	-0.4%	316.95	311.68	-1.7%
60	353.55	356.25	0.8%	356.01	350.40	-1.6%
65	236.24	236.16	0.0%	237.56	229.91	-3.2%
70	255.96	258.95	1.2%	256.50	249.27	-2.8%
75	273.90	280.57	2.4%	273.05	266.77	-2.3%
80	290.07	301.01	3.8%	287.21	282.42	-1.7%

Costs for Retirees and Spouses Expected Monthly Per Capita Costs						
Age	HMO Plans Medical/RX					
	Male			Female		
	Current	Proposed	Change	Current	Proposed	Change
50	\$783.46	\$783.46	0.0%	\$866.50	\$866.50	0.0%
55	915.14	915.14	0.0%	940.33	940.33	0.0%
60	1,070.77	1,070.77	0.0%	1,030.65	1,030.65	0.0%
65	265.17	265.17	0.0%	244.25	244.25	0.0%
70	302.20	302.20	0.0%	268.28	268.28	0.0%
75	341.50	341.50	0.0%	294.05	294.05	0.0%
80	383.23	383.23	0.0%	321.80	321.80	0.0%

# Experience Analysis Results

## Adjustments for Disabled Members

Currently in the valuation, claims for disabled members are increased by 10 percent if not eligible for Medicare and 40 percent if eligible for Medicare.

Credible data is not available; therefore, based on industry standard information, we recommend maintaining the assumption to increase claims for disabled members by 10 percent if not eligible for Medicare and 40 percent if eligible for Medicare.

## Adjustments for Children

Claims for current retirees and survivors of retirees with children are increased to account for claims generated by children. Currently, this increase is equal to 7.5 percent for medical and Rx claims and 10.5 percent for dental claims for general retirees and 8.0 percent for medical and Rx claims and 11.5 percent for dental claims for public safety retirees. The loads are removed once the retiree or survivor reaches the age of 65. Based on observed experience we recommend changing the rates as follows:

Children's Claim Adjustment Factor for Retirees under Age 65				
Claims Type	General Retirees		Public Safety Retirees	
	Current	Proposed	Current	Proposed
Medical and Rx	7.50%	7.00%	8.00%	8.00%
Dental	10.50%	10.50%	11.50%	11.50%

Claims for future retirees with children are increased to account for claims generated by children. Currently, this increase is equal to 2.5 percent for medical and Rx claims and 2.0 percent for dental claims for general retirees and 3.0 percent for medical and Rx claims and 2.5 percent for dental claims for public safety retirees. The loads are removed once the retiree or survivor reaches the age of 65. Based on observed experience we recommend changing the rates as follows:

Children's Claim Adjustment Factor for Future Retirees				
Claims Type	General Retirees		Public Safety Retirees	
	Current	Proposed	Current	Proposed
Medical and Rx	2.50%	2.25%	3.00%	3.00%
Dental	2.00%	1.75%	2.50%	2.50%

## Experience Analysis Results

### Per Capita Claim Costs – Dental

The following table represents the assumed per capita dental claims costs for sample ages used in the most recent valuation. Costs were developed separately for DPO/Indemnity and the Pre-Paid Plans, based on actual premium, claim and enrollment data. Because dental costs generally do not vary by age or gender, they remain unchanged as a result of this experience analysis.

Costs for Retirees and Spouses				
Expected Monthly Per Capita Costs - Non CSU Retirees				
Age	Dental Plans			
	DPO/Indemnity		Pre-Paid Plans	
	First Person	Second Person	First Person	Second Person
50	\$51.80	\$38.89	\$19.09	\$11.38
55	51.80	38.89	19.09	11.38
60	51.80	38.89	19.09	11.38
65	51.80	38.89	19.09	11.38
70	51.80	38.89	19.09	11.38
75	51.80	38.89	19.09	11.38
80	51.80	38.89	19.09	11.38

Costs for Retirees and Spouses				
Expected Monthly Per Capita Costs - CSU Retirees				
Age	Dental Plans			
	DPO/Indemnity		Pre-Paid Plans	
	First Person	Second Person	First Person	Second Person
50	\$35.74	\$32.01	\$21.73	\$14.08
55	35.74	32.01	21.73	14.08
60	35.74	32.01	21.73	14.08
65	35.74	32.01	21.73	14.08
70	35.74	32.01	21.73	14.08
75	35.74	32.01	21.73	14.08
80	35.74	32.01	21.73	14.08

We recommend maintaining the methodology currently being used to develop the dental claims costs.

# Experience Analysis Results

## Medicare Part B Premiums

Currently, retired members as of June 30, 2022, are assumed to pay \$170.10 in 2022. Other members as of June 30, 2022, are also assumed to pay \$170.10 in 2022. Furthermore, the valuation currently assumes Social Security benefit increases will be sufficient to cover projected increases in the Part B premium. Our valuation does not consider the member’s income when estimating Part B premiums.

We recommend maintaining these assumptions for Medicare Part B premiums.

## Medicare Part B Reimbursement

For eligible retirees, if the retiree is signed up for a CalPERS sponsored Medicare plan and the monthly State contribution is more than the plan’s monthly premium, CalPERS will credit the retiree the difference between the two amounts, up to the amount of the Part B premium.

New Retirees with Healthcare Coverage Eligible for a Part B Reimbursement						
Year	Standard Part B Premium per Member	Number of Part B Reimbursements (per Member) *				Total
		No Part B Reimbursement	Below Standard Part B Premium	Standard Part B Premium	Above Standard Part B Premium	
2019	\$135.50	173	346	1,722	257	2,498
2020	\$144.60	169	294	1,835	268	2,566
2021	\$148.50	164	249	2,200	348	2,961
2022	\$170.10	135	248	1,785	221	2,389

\* Part B reimbursement approximated by taking the total reimbursement for the retiree’s record divided by the number of individuals with Medicare healthcare coverage on the retiree’s record. Each retiree is only counted once in table (even if retiree and spouse have Medicare coverage) since the average reimbursement is used.

Following is a table of sample healthcare plans and amounts available for Part B Reimbursement, for 100/90 eligible members, after the medical premium.

Sample Amounts Available for Medicare Part B Reimbursements			
Health Plan	2022 Maximum State Contribution	2022 Employee Only Medicare Premium	Amount Remaining for Part B Reimbursement
Kaiser	\$816.00	\$302.53	\$513.47
Anthem HMO	\$816.00	\$360.19	\$455.81
PERS Gold	\$816.00	\$377.41	\$438.59
PERS Platinum	\$816.00	\$381.94	\$434.06
UnitedHealthcare	\$816.00	\$294.65	\$521.35
UnitedHealthcare Edge	\$816.00	\$347.21	\$468.79
Western Health Advantage	\$816.00	\$314.94	\$501.06



## Experience Analysis Results

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### Data Processing Assumptions

Each year due to certain data limitations, certain assumptions are made during data processing. In the past, these assumptions have been immaterial to the results of the valuation. As part of the annual data review process, we recommend evaluating whether or not certain data assumptions are necessary. Furthermore, any assumption pertaining to data processing will be disclosed in the actuarial valuation report.



## **SECTION III**

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### **COST IMPACT OF RECOMMENDED CHANGES**

## Cost Impact of Recommended Changes

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If approved by the SCO, the proposed assumptions will first be used in the actuarial valuation as of June 30, 2023. Below we have presented the impact of changing the assumptions measured as of June 30, 2022. This is presented for informational purposes only.

## Cost Impact of Recommended Changes

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM					
IMPACT OF CHANGE IN ASSUMPTIONS					
FULL-FUNDING ACTUARIAL VALUATION AT JULY 1, 2022 (\$ IN 000'S)					
TOTAL OF ALL ACTUARIAL VALUATION GROUPS					
	Current Assumptions	Change in Participation, Coverage, Continuance and Contract Mix	Change in Aging, Disability Load, Children Load, and Percent of Future Disabled Members Eligible for Medicare and Part B Premiums	Change in EGWP/IRA	After All Recommended Changes
<b>Number of Participants Covered</b>					
Active Participants	281,298	-	-	-	281,298
Retired Participants <sup>a</sup>	<u>207,053</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>207,053</u>
<b>Total Participants</b>	<b>488,351</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>488,351</b>
<b>Actuarial Present Value of Projected Benefits</b>					
Active Participants	\$ 44,137,557	\$ 337,843	\$ (51,373)	\$ 264,471	\$ 44,688,498
Retired Participants	<u>41,211,415</u>	<u>-</u>	<u>(79,770)</u>	<u>328,661</u>	<u>41,460,306</u>
<b>Total Participants</b>	<b>\$ 85,348,972</b>	<b>\$ 337,843</b>	<b>\$ (131,143)</b>	<b>\$ 593,132</b>	<b>\$ 86,148,804</b>
<b>Actuarial Accrued Liability</b>					
Active Participants	\$ 25,868,118	\$ 232,213	\$ (27,794)	\$ 122,863	\$ 26,195,400
Retired Participants	<u>41,211,415</u>	<u>-</u>	<u>(79,770)</u>	<u>328,661</u>	<u>41,460,306</u>
<b>Total Participants</b>	<b>\$ 67,079,533</b>	<b>\$ 232,213</b>	<b>\$ (107,564)</b>	<b>\$ 451,524</b>	<b>\$ 67,655,706</b>
Actuarial Value of Assets	\$ 5,131,070	\$ -	\$ -	\$ -	\$ 5,131,070
Unfunded Actuarial Accrued Liability	\$ 61,948,463	\$ 232,213	\$ (107,564)	\$ 451,524	\$ 62,524,636

<sup>a</sup> Retired participants with dental only coverage, 12,795 as of July 1, 2022, are excluded from the above counts but are reflected in the actuarial valuation.



## Cost Impact of Recommended Changes

CALIFORNIA STATE EMPLOYEES POSTRETIREMENT BENEFITS PROGRAM					
IMPACT OF CHANGE IN ASSUMPTIONS					
FULL-FUNDING ACTUARIAL VALUATION AT JULY 1, 2022 (\$ IN 000'S)					
TOTAL OF ALL ACTUARIAL VALUATION GROUPS					
	Current Assumptions	Change in Participation, Coverage, Continuance and Contract Mix	Change in Aging, Disability Load, Children Load, and Percent of Future Disabled Members Eligible for Medicare and Part B Premiums	Change in EGWP/IRA	After All Recommend Changes
Net Employer ADC for FYE June 30, 2023					
Normal Cost	\$ 1,751,828	\$ 8,573	\$ (2,242)	\$ 12,322	\$ 1,770,481
Administrative Expenses	3,622	3	(7)	-	3,618
Amortization of UAAL	3,581,513	13,262	(6,316)	26,435	3,614,894
Total ADC	\$ 5,336,963	\$ 21,838	\$ (8,565)	\$ 38,757	\$ 5,388,993
Estimated Member Contributions	(692,551)	(2,707)	777	(5,077)	(699,558)
Net Employer ADC	\$ 4,644,412	\$ 19,131	\$ (7,788)	\$ 33,680	\$ 4,689,435
Expected Claim Costs for FYE June 30, 2023 <sup>a</sup>					
Employer Explicit Costs					
Medical and Rx Claims	\$ 1,832,637	\$ 562	\$ (16)	\$ -	\$ 1,833,183
Part B Reimbursement	437,630	(12)	-	-	437,618
Dental Claims	127,973	3	(3)	-	127,973
Total	\$ 2,398,240	\$ 553	\$ (19)	\$ -	\$ 2,398,774
Employer Implicit Costs	501,784	49	(4,478)	(2)	497,353
Total Employer Costs <sup>b</sup>	\$ 2,900,024	\$ 602	\$ (4,497)	\$ (2)	\$ 2,896,127
Retiree Share of Claim Costs					
Medical and Rx Claims	\$ 112,211	\$ (303)	\$ (1)	\$ -	\$ 111,907
Dental Claims	35,956	1	(1)	-	35,956
Total	\$ 148,167	\$ (302)	\$ (2)	\$ -	\$ 147,863
Total Claims Costs	\$ 3,048,191	\$ 300	\$ (4,499)	\$ (2)	\$ 3,043,990

<sup>a</sup> The explicit employer cost is an estimate of the employer paid premium for the fiscal year-end June 30, 2023. It is based on an actuarial projection of the retiree population using the demographic assumptions contained in Sections E and F of the report, and a projection of premium rates assuming actual trend for fiscal year-end June 30, 2023. The actual explicit employer subsidy will be updated based on the actual blended premium paid by the employer during the fiscal year.

<sup>b</sup> The total employer costs, comprised of the explicit and implicit subsidy, will also be updated at fiscal year-end, as the actual claim experience for retired members becomes available.



## **SECTION IV**

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### **GLOSSARY**

## Glossary

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**Accrued Service.** The service credited under the plan, which was rendered before the date of the actuarial valuation.

**Actuarial Accrued Liability (AAL).** The difference between (i) the actuarial present value of future plan benefits; and (ii) the actuarial present value of future normal cost, which is sometimes referred to as "accrued liability" or "past service liability."

**Actuarial Assumptions.** Key OPEB-related assumptions include per capita costs, healthcare trend inflation, and participation at retirement. Key pension-related assumptions include mortality, disability, turnover, retirement, and salary increases. OPEB-related per capita costs are generally based on claims, enrolment experience, and a set of aging factors. Demographic assumptions such as rates of mortality, disability, turnover, and retirement are generally based on past experience, often modified for projected changes in conditions. Discount rates are generally based on the expected return on assets supporting the liability.

**Actuarial Cost Method.** A method of allocating cost during an active member's working lifetime. The portion of present value of future benefits attributable to prior service is called the actuarial accrued liability. The portion of the present value of future benefits attributable to future service is called the present value of future normal costs.

**Actuarial Present Value.** The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Actuarial Value of Assets.** The value of cash, investments, and other property belonging to a pension or OPEB plan, as used by the actuary for the purpose of an actuarial valuation.

**Amortization.** A schedule to finance an interest-bearing liability by means of periodic payments of interest and principal.

**Annual OPEB Expense.** An accrual-basis measure of the periodic cost of an employer's participation in a defined OPEB plan.

**Actuarial Determined Contribution (ADC).** The ADC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period.

**Discount Rate.** The rate used to adjust a series of future payments to reflect the time value of money.

**Entry-Age Normal Cost Actuarial Method.** A method under which the actuarial present value of projected benefits of each individual included is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the normal cost.

**Expected Net Employer Cost.** The difference between the age-adjusted per capita claim cost and retiree's share of the premium.

## Glossary

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**Explicit Rate Subsidy.** The portion of the premium paid by the employer. The premium may be based on the experience of active and retired members or retired members only.

**Governmental Accounting Standards Board (GASB).** GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

**Implicit Rate Subsidy.** The difference between the age-adjusted per capita claims costs and premium rate.

**Medical Trend Rate (Health Inflation).** The increase in the plan's cost over time. Trend includes all elements that may influence a plan's cost, with the exception of increases to due age. Trend elements include price inflation, changes in utilization, advances in medical technology, and cost shifting.

**Net OPEB Liability.** An accounting liability based on the difference between the Total OPEB Liability and Fiduciary Net Position, which is similar to the difference between the Actuarial Accrued Liability using the Entry Age Normal cost method and the Market Value of Assets. .

**Normal Cost.** The portion of the present value of benefits attributable to the current plan year under the given cost method.

**Other Postemployment Benefits (OPEB).** OPEB means postemployment benefits other than pensions. OPEB generally takes the form of medical, prescription drugs, dental, vision, or other healthcare benefits.

**Pay-As-You-Go Funding.** A method of financing benefits by making required benefit payments only as they come due.

**Plan Member.** A plan's membership includes active service employees, terminated employees who are eligible to receive benefits in the future, and retired employees and beneficiaries who are currently receiving benefits.

**Pre-Funding.** A policy of financing benefits by making contributions into an interest earning dedicated trust so that contributions and investment income can be used to pay future benefits.

**Present Value of all Projected Benefits.** The present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value of money and the probabilities of payment.

**Unfunded Actuarial Accrued Liability (UAAL).** The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

**Valuation Assets.** The value of current plan assets recognized for valuation purposes.