Valley Water

Clean Water • Healthy Environment • Flood Protection

<u>Disclaimer</u>: Certain information contained herein, including projections and estimates prepared by Valley Water, is based on information provided by CalPERS. Information that CalPERS provides to Valley Water is based on CalPERS' estimates and assumptions of future events. Valley Water has not independently verified information provided by CalPERS. Information, estimates, and expressions of opinion prepared by Valley Water contained herein are also based on certain assumptions and are subject to a variety of uncertainties that could cause any actual results to be materially different. Notwithstanding any information contained herein, Valley Water continues to rely upon information provided by CalPERS when preparing its audited financial statements and for other purposes regarding pension and other post-employment benefits related matters.

Pension Obligations and Unfunded Liability Financing Scenarios

July 28, 2020

Valley Water

Agenda

1. ***Valley Water Pension Plan***
2. *Pension Obligation Bond (POB) Scenario Analysis*
3. *Pension Obligation Bond (POB) Commentaries*
4. *Summary Q&A and References*

Valley Water Pension Plan

- Valley Water offers employer defined benefit pension plan administered by California Public Employees Retirement System (CalPERS)

- CalPERS acts as common investment and administrative agent for participating member employers

Valley Water Pension Benefits

- Eligible public employees and beneficiaries receive:
  - Service retirement benefits
  - Disability benefits
  - Annual cost of living adjustments
  - Death benefits

- Benefit provisions under the Plan are established by State statute and Valley Water resolution

Valley Water Required Pension Contributions

- Required funding contributions for the Plan are determined by CalPERS actuary annually and are effective each July 1

- Total minimum required annual employer contribution comprised of two components:
  - Normal Cost
  - Amortized portion of Unfunded Accrued Liability (UAL)

Valley Water Required Pension Contributions

Normal Cost

- Annual cost of service accrual for the upcoming fiscal year for active employees

Unfunded Accrued Liability (UAL)

- Excess of the total actuarial accrued liability over the market value of plan assets
- UAL changes over time to reflect changes in market value and actuarial assumptions

Valley Water Required Pension Contributions

	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21
Normal Cost	$ 8,975,975	$ 9,640,016	$ 10,613,211
UAL Contribution (Prepayment)	13,163,082	15,251,637	16,773,331
Total	$ 22,139,057	$ 24,891,653	$ 27,386,542

- **Normal Cost paid bi-weekly per payroll schedule - no option to prepay**
- **Annual UAL required contribution is prepaid in July each year to take advantage of discount at the actuarily-assumed discount rate**

Valley Water Unfunded Accrued Liability

	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21
Unfunded Accrued Liability	$ 247,765,798	$ 252,441,342	$ 254,697,360

- **Reflects liability as of the first day of each fiscal year (July 1), as determined by actuary**

Valley Water

Valley Water Required Pension Contributions determined by Actuarial Analysis

- Determination of both normal cost and annually amortized UAL requires complex actuarial calculations
- Calculations based on a set of actuarial assumptions
- Demographic assumptions
  - Mortality, disability, retirements
- Economic assumptions
  - Discount (investment) rate, salary growth, inflation

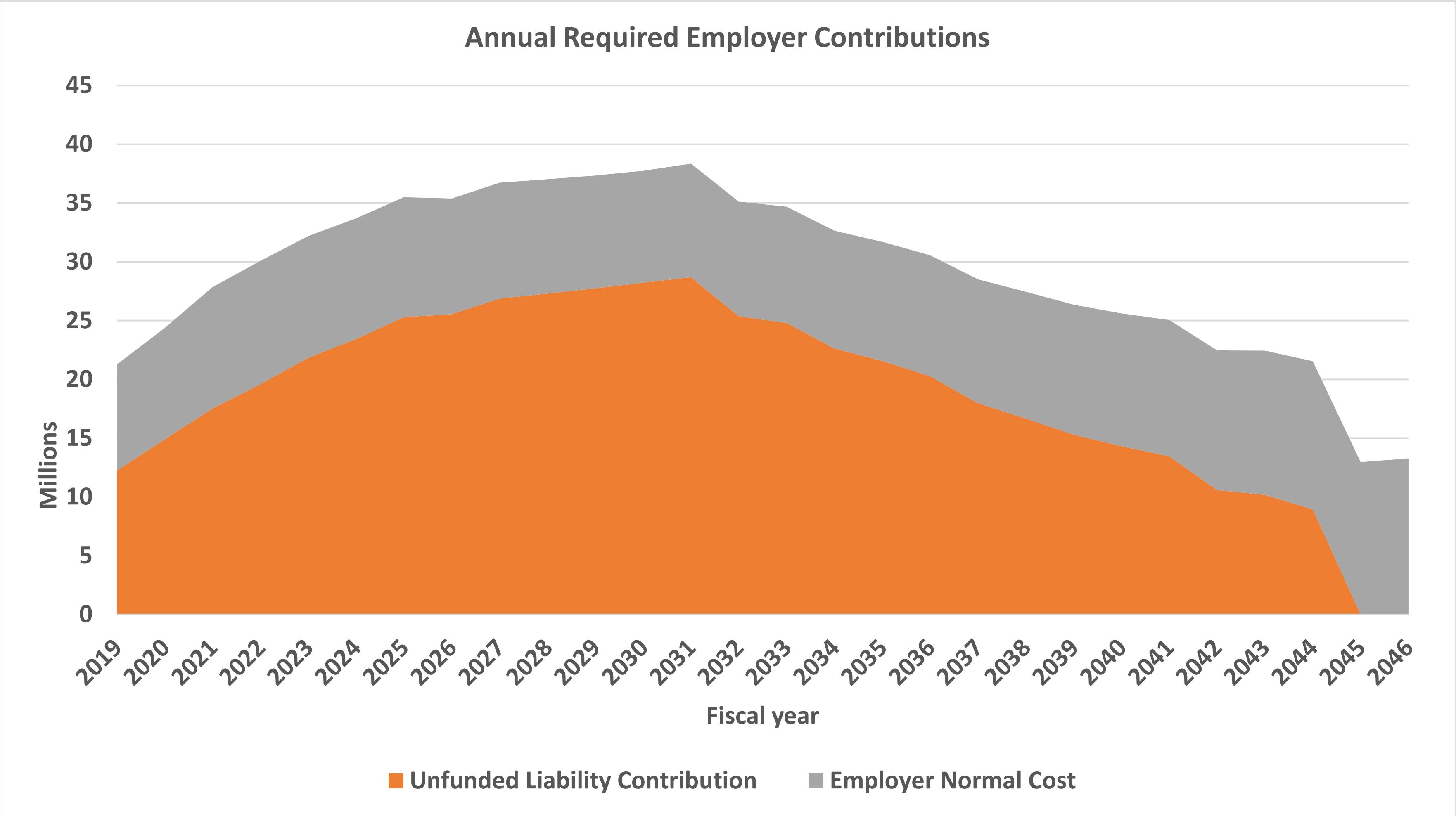
Key Actuarial Economic Assumptions

Fiscal Year 2020-21 Plan Contribution Assumptions

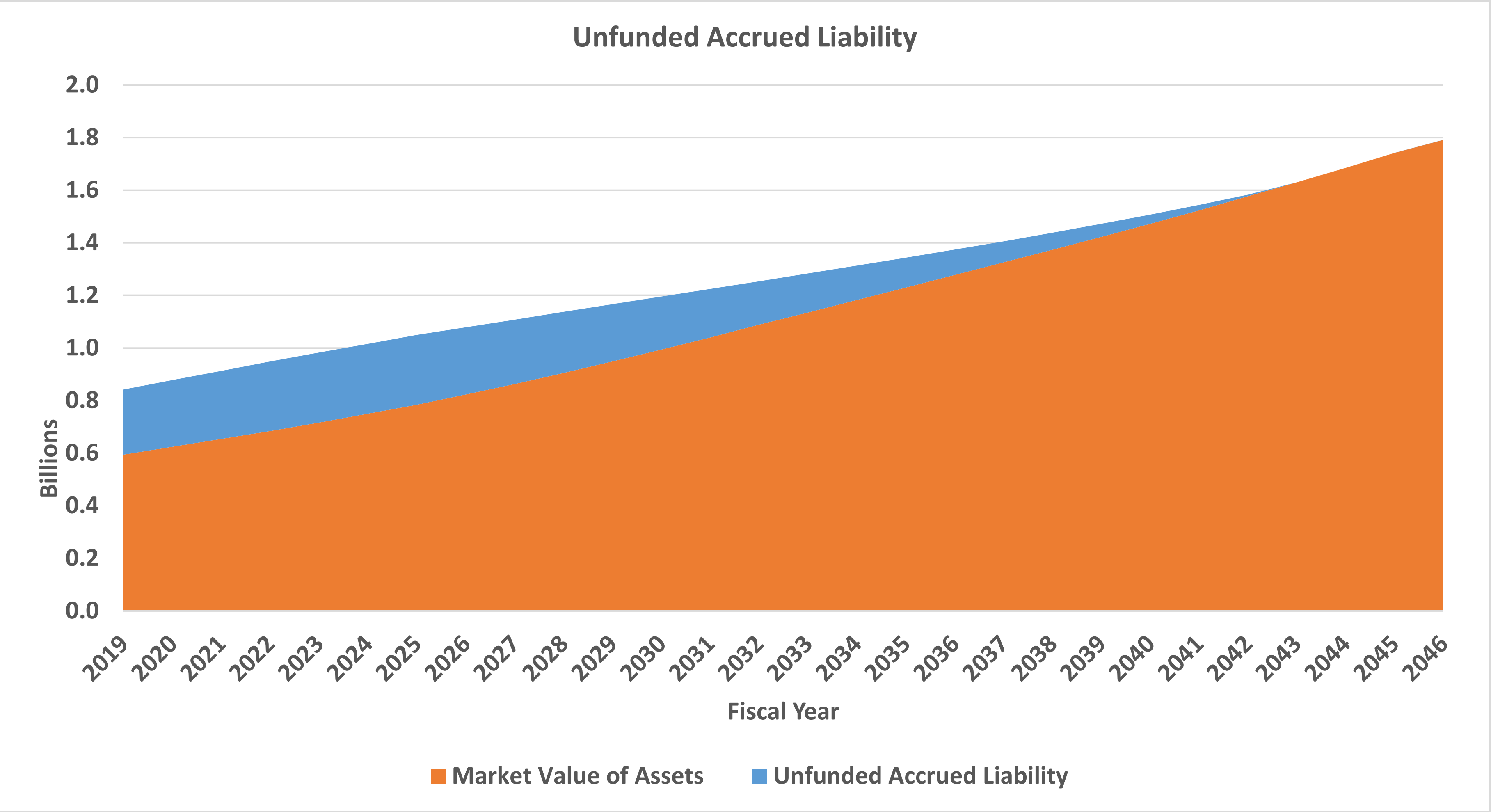
- Discount (investment) rate = 7.00%*
- Payroll growth rate = 2.75%

* *Revised discount rate: phased-in from 7.50% (FY18 and prior), 7.375% (FY19), and 7.25% (FY20)*

Valley Water Required Pension Contributions



Valley Water Unfunded Accrued Liability



valleywater.org

Valley Water

Actuarial Assumptions vs. Performance

- Changes in UAL year-to-year are due to differences (gains or losses) between actual experience and the actuarial assumptions used to calculate prior years' required contributions

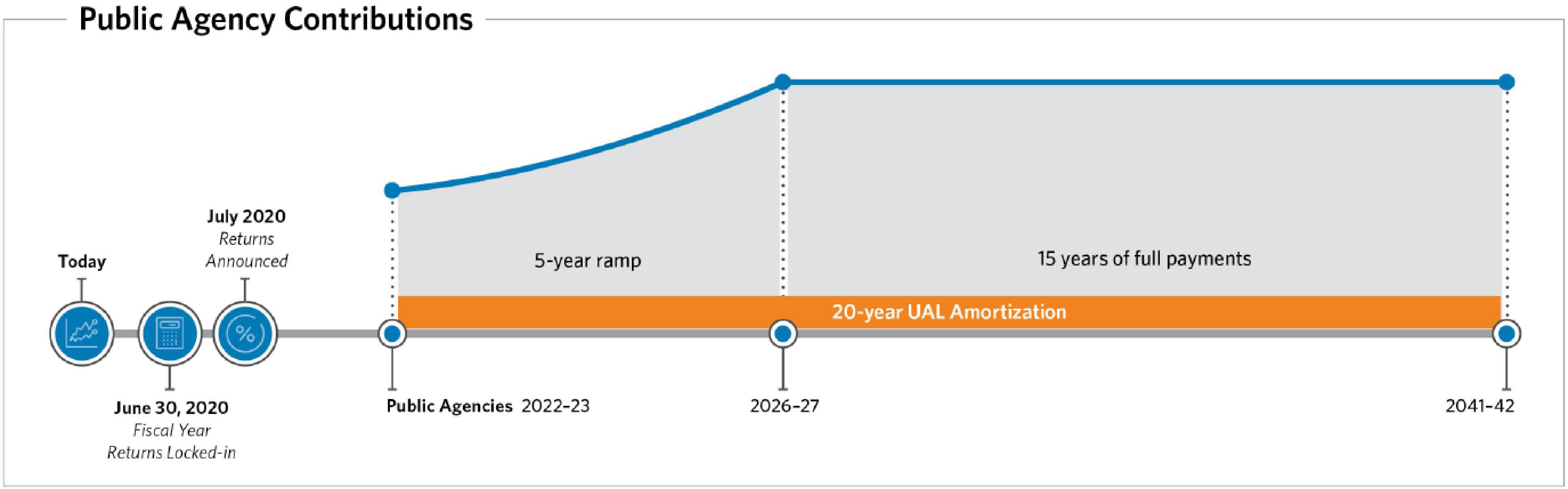
- Employer contributions inevitably fluctuate, <u>especially due to ups and downs in investment returns</u>

How CalPERS Investment Gains/Losses are Amortized

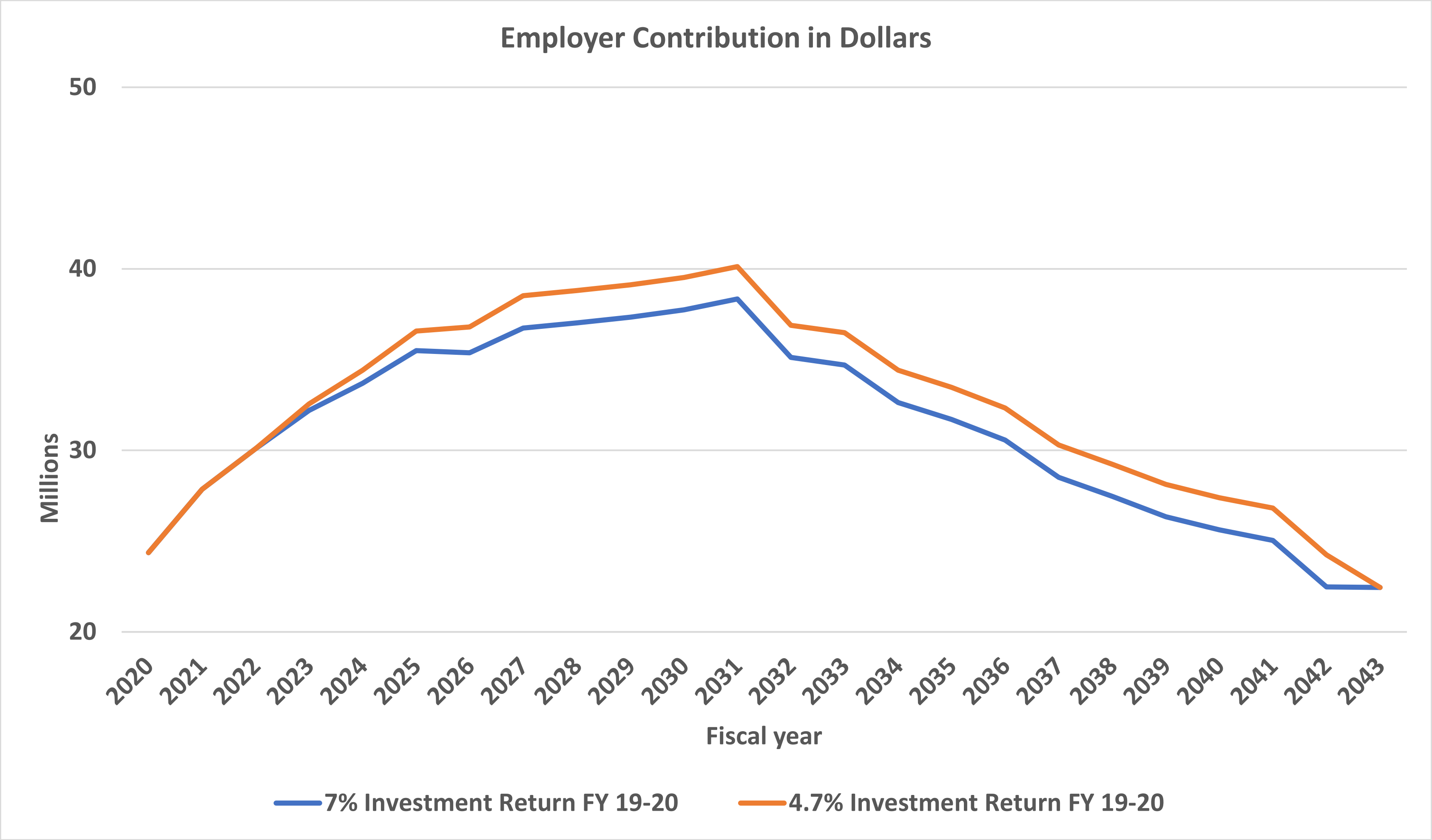
- New UAL amortization policy adopted by CalPERS Board of Administration effective FY 2020-21
  - Shortens period over which actuarial gains and losses are amortized from 30 years to 20 years
  - No longer 5-year ramp-down (only 5-year ramp-up) on investment gains/losses

- Can result in short-term increases to required employer contributions, but not expected to increase long-term cost of plan

How CalPERS Investment Gains/Losses are Amortized



FY 20 CalPERS Investment Return



Note: The impact analysis above assumes CalPERS returns match their assumed rate of 7% per year for subsequent Plan Years

- **CalPERS actual return for FY 20 was 4.7%**
- **$350K impact in FY 23 ramping up to $1.8M in FY 27**

valleywater.org

Valley Water

Options to Improve Funded Status

	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21
Discounted Prepayment	$ 13,163,082	$ 15,251,637	$ 16,773,331
Additional Employer Funding	3,000,000	3,000,000	3,000,000
Additional Employee Funding	500,000	1,051,000	1,661,955
Actual Annual UAL Payment	$ 16,663,082	$ 19,302,637	$ 21,435,286

- **Continue to:**
  - **Pay minimum required annual UAL payment, and**
  - **Further paydown UAL with additional budgeted funds ($3M OPEB redirect) and employee contributions**

Options to Improve Funded Status

- Other options include:
  - Increase employer contributions
  - Increase contribution from employees
  - Reduce permanent staffing levels over time (contract services)
  - Pension Obligation Bonds (POBs)

Agenda

1. *Valley Water Pension Plan*
2. ***Pension Obligation Bond (POB) Scenario Analysis***
3. *Pension Obligation Bond (POB) Commentaries*
4. *Summary Q&A and References*

valleywater.org

Valley Water

Pension Obligation Bonds

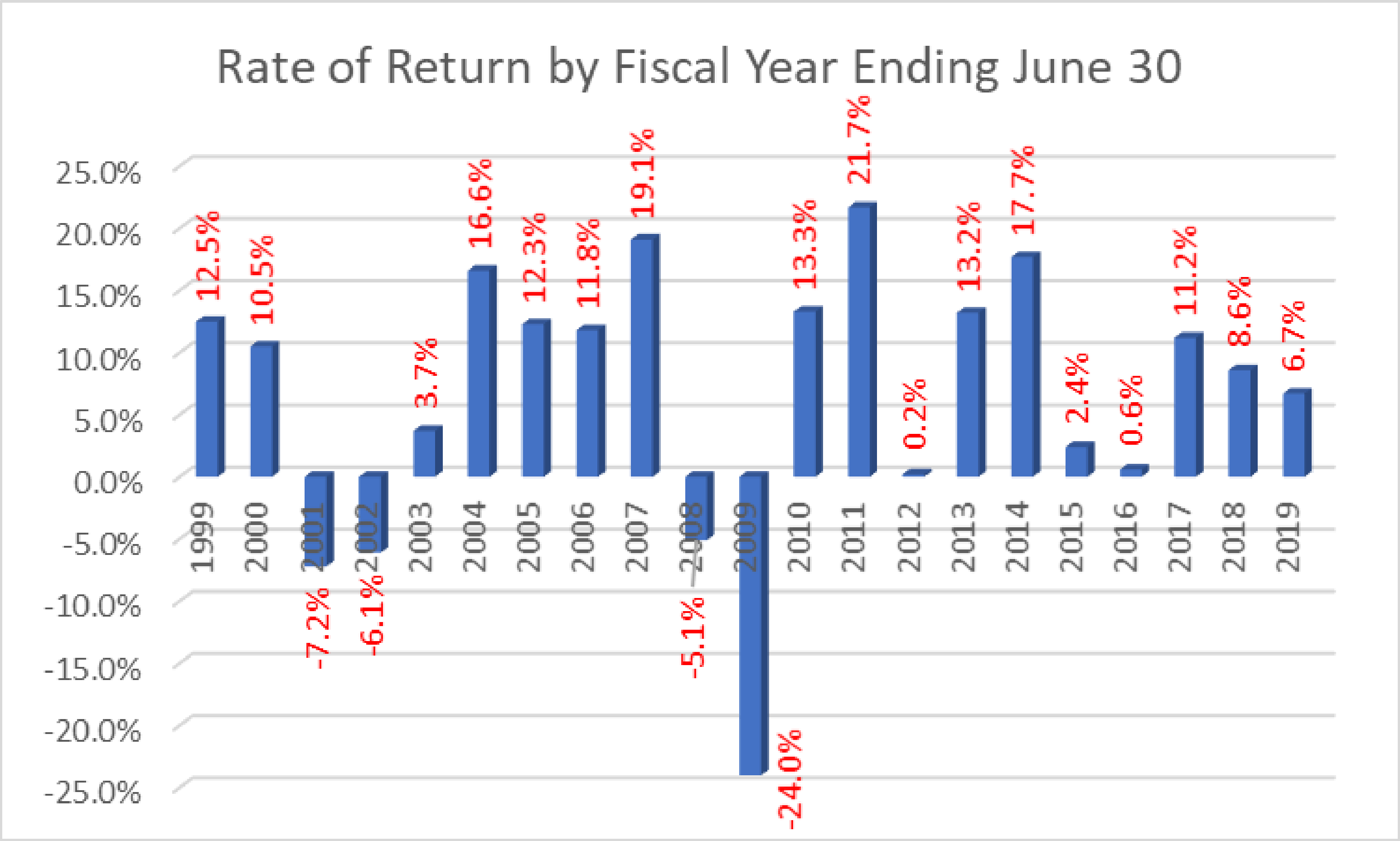
- Taxable bonds that some state and local governments issue to pay unfunded portion of pension liabilities

- May result in future savings if bond proceeds invested in the pension fund achieve greater return than costs of the bonds

- May lead to increased costs from both debt service requirements and unmet unfunded pension liabilities if targeted rate of return is not achieved

CalPERS Investments
Annual Rates of Return

Historical annual returns of the Public Employees' Retirement Fund in 1999-2019 ranges from -24.0% to +21.7%



valleywater.org

Valley Water

CalPERS Investments
Compound Annual Growth Rates

Public Employees' Retirement Fund

Total Investment Returns as of 6/30/2019 (for FYs ending 6/30)

1 year……………………………….6.7%

3 years……………………………….8.8%

5 years……………………………….5.8%

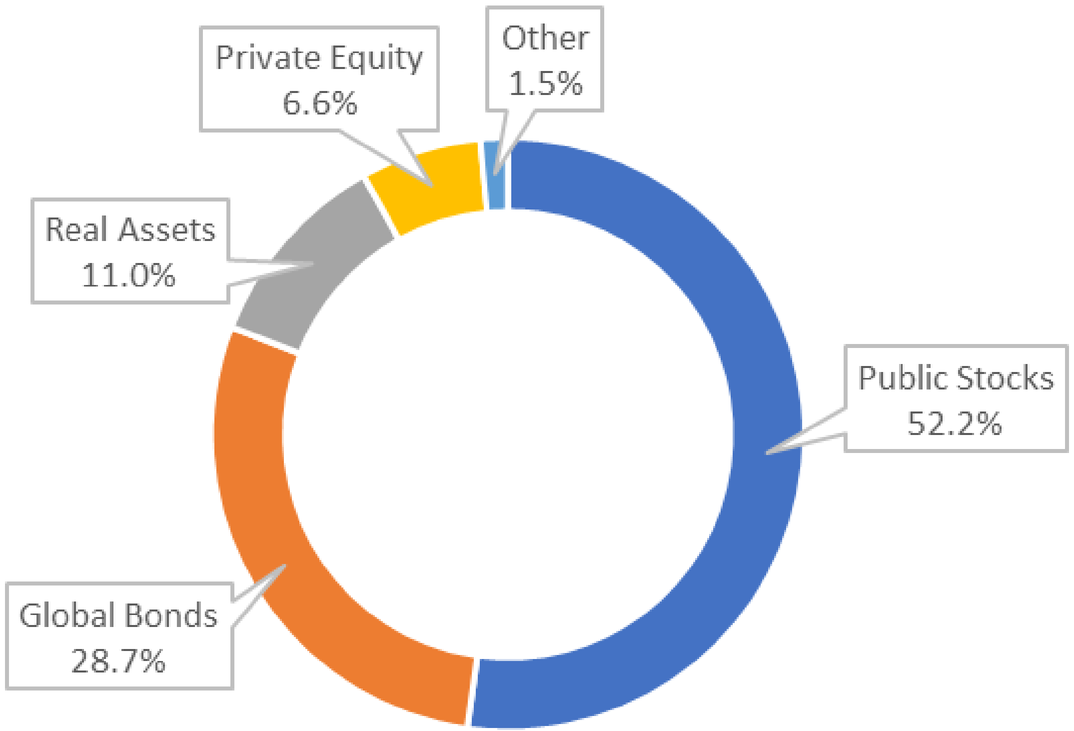
10 years……………………………..9.1%

20 years……………………………..5.8%

30 years……………………………..8.1%

CalPERS Investments
Asset Allocation as of 12/31/2019

Public Employees’ Retirement Fund



POB Analysis

Assumptions

- **July 2019 CALPERS annual valuation report**
  - **$254.7 million Unfunded Accrued Liability (UAL)**
  - **7% assumed actuarial rate of return**
  - **Fixed term amortization of 30 years (28 years remaining)**

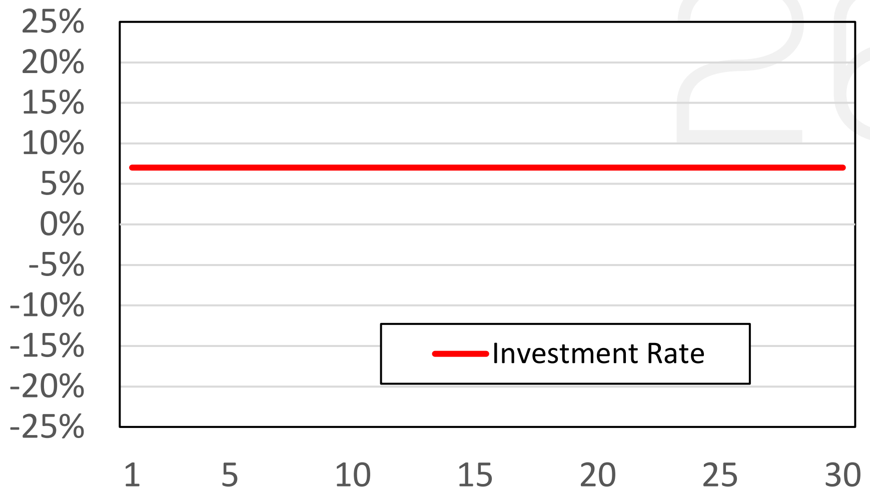
- **Taxable bond market interest rates as of 7/6/2020**
  - **POBs are issued to fund 100% of UAL plus issuance costs**
  - **30-year repayment period**
  - **All-in True Interest Cost of 3.17%**

- **Assumed future investment rates of return for illustrative purposes only**

POB Analysis

If CalPERS earns 7%/year over 30 years, issuing POBs to fund UAL may result in $132M savings

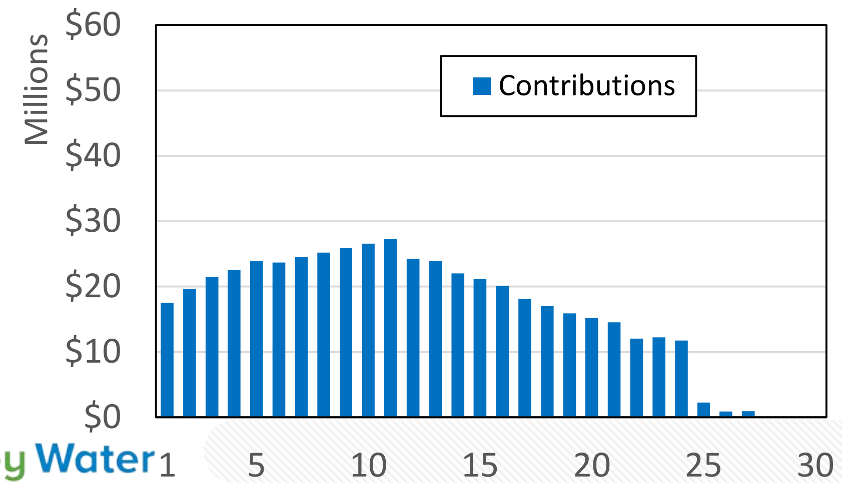
Investment Assumption (Constant 7%)



NO POBs

- Contributions in years 1-28
- Portfolio rate of return 7.00%

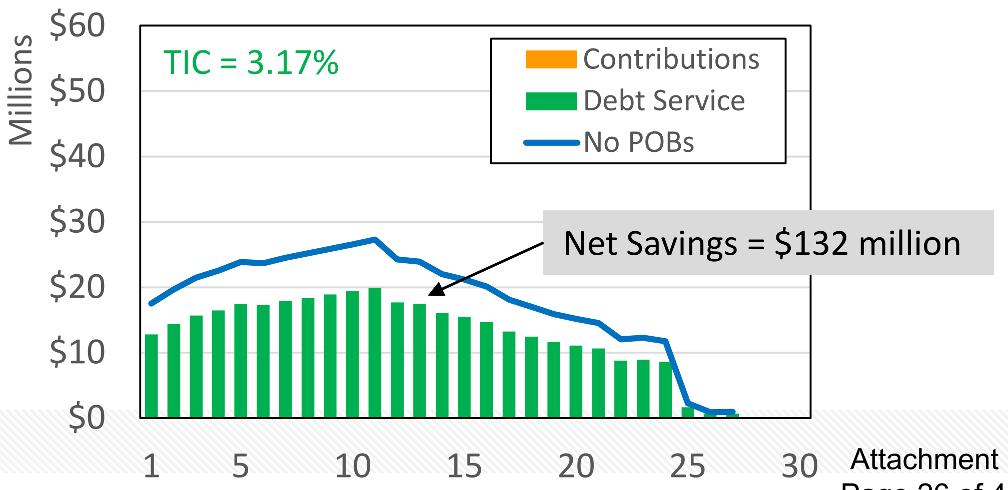
PERS Payments with NO POBs



WITH POBs

- POB contribution in year 0
- No additional contributions
- Portfolio rate of return 7.00%

PERS Payments vs. POB Debt Service

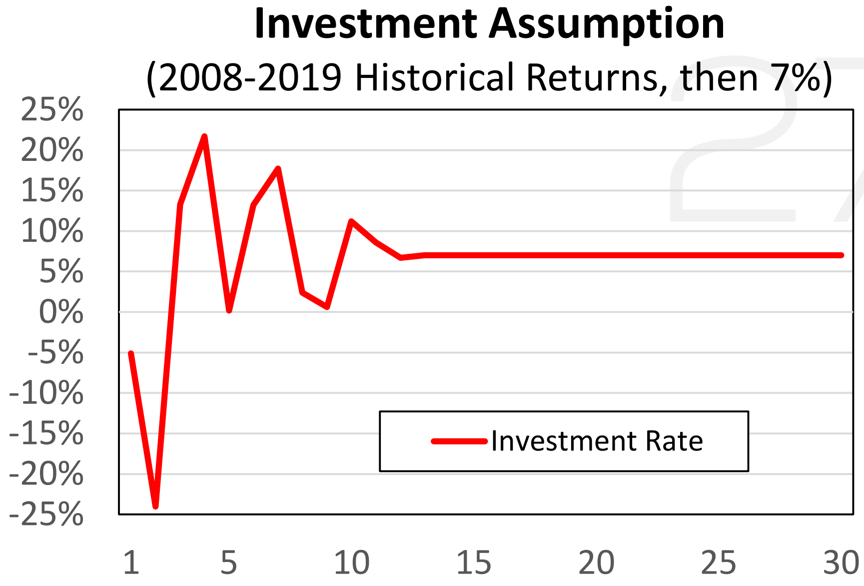


valleywater.org

Valley Water

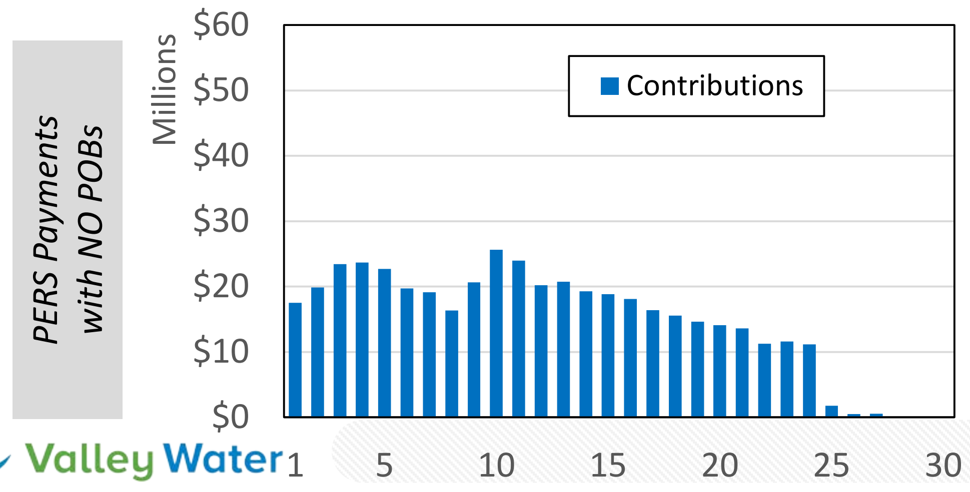
POB Analysis

If CalPERS experiences 2008-2019 historical returns then 7%/year thereafter, issuing POBs may result in $45M higher costs over 30 years



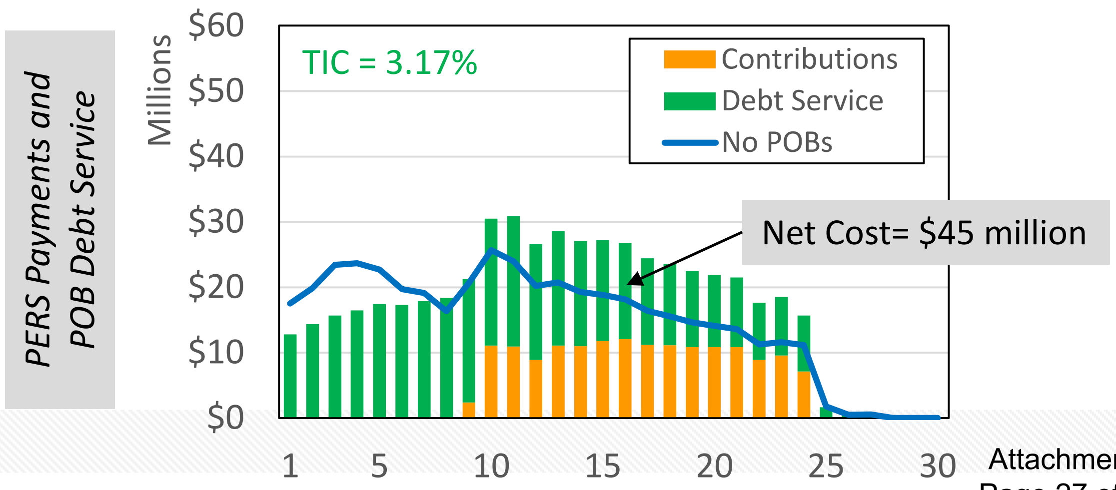
NO POBs

- Contributions in years 1-28
- Portfolio rate of return 7.15%



WITH POBs

- POB contribution in year 0
- Additional contributions in years 9-28
- Portfolio rate of return 6.14%



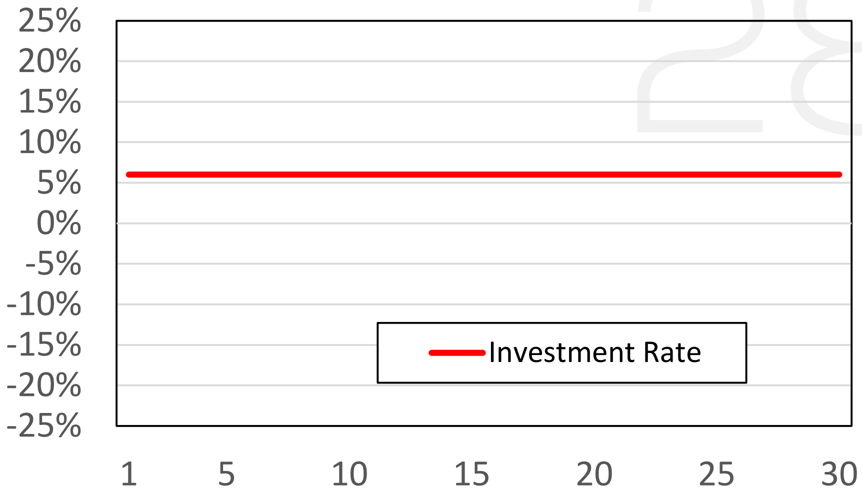
valleywater.org

Valley Water

POB Analysis

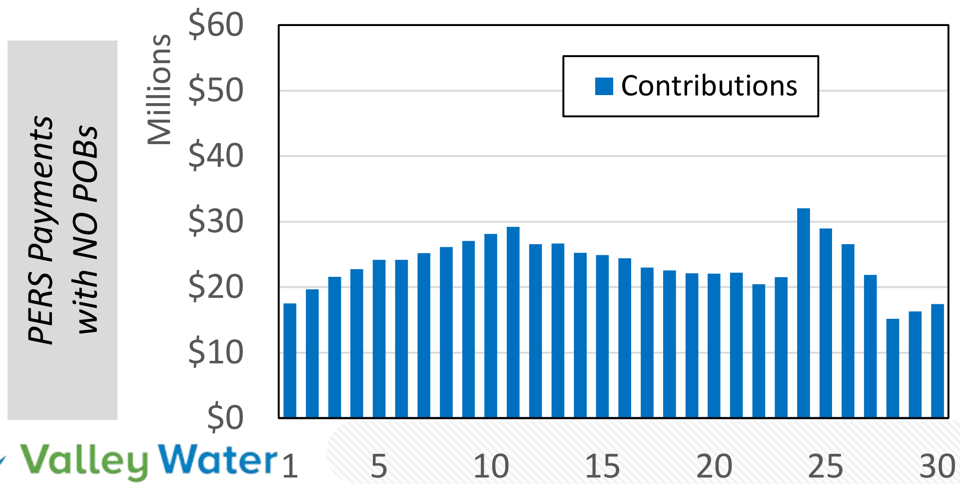
If CalPERS earns 6%/year over 30 years, issuing POBs to fund UAL may result in $66M savings

Investment Assumption (Constant 6%)



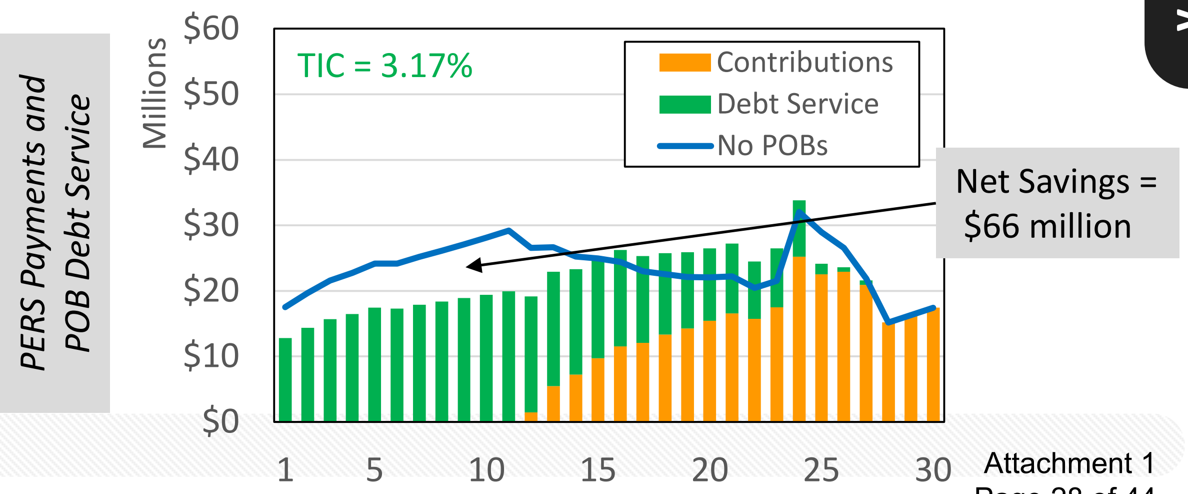
NO POBs

- Contributions in years 1-30
- Portfolio rate of return 6.00%



WITH POBs

- POB contribution in year 0
- Additional contributions in years 11-30
- Portfolio rate of return 6.00%



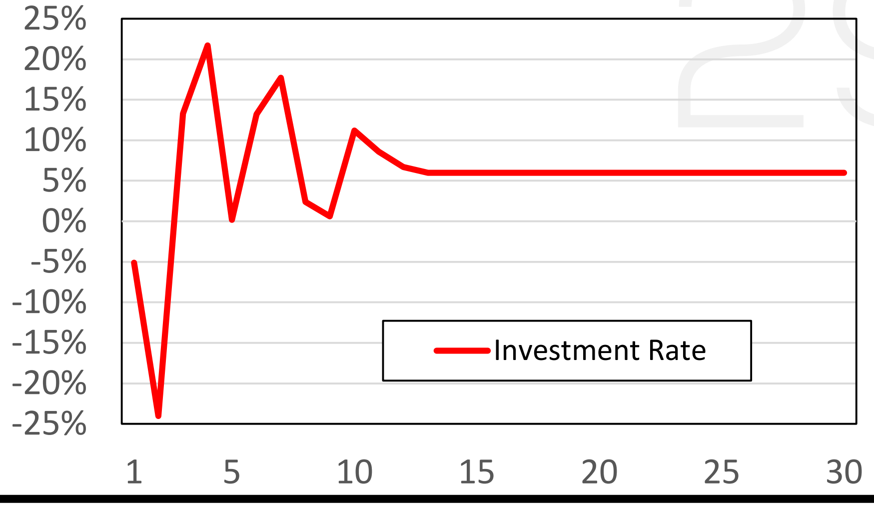
valleywater.org

Valley Water

POB Analysis

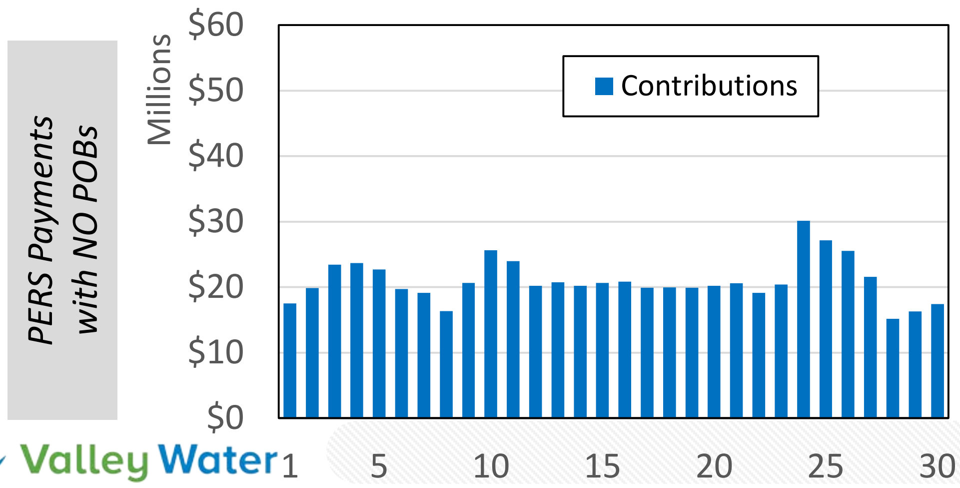
If CalPERS experiences 2008-2019 historical returns then 6%/year thereafter, issuing POBs may result in $45M higher costs over 30 years

Investment Assumption
(2008-2019 Historical Returns, then 6%)



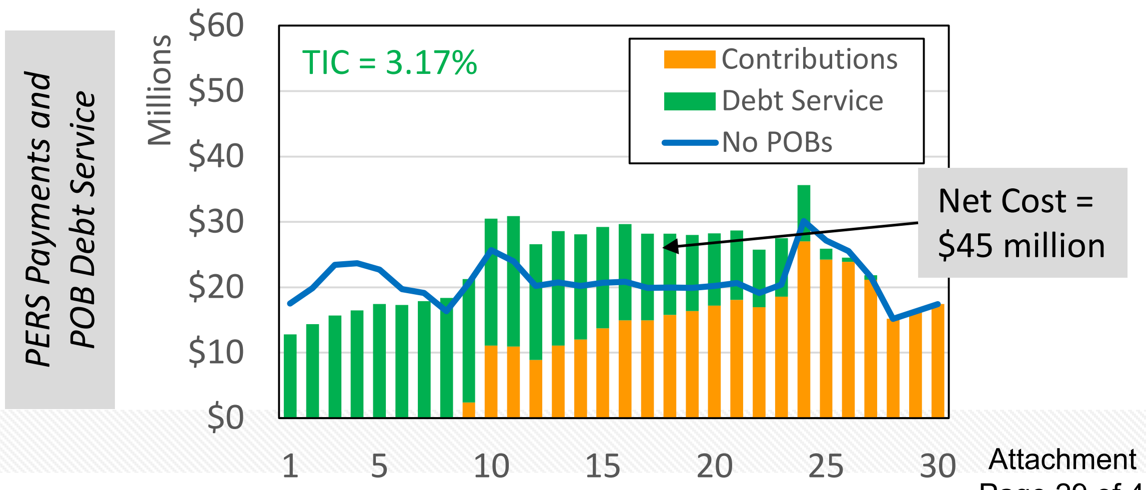
NO POBs

- Contributions in years 1-30
- Portfolio rate of return 6.33%



WITH POBs

- POB contribution in year 0
- Additional contributions in years 9-30
- Portfolio rate of return 5.61%



Agenda

1. *Valley Water Pension Plan*
2. *Pension Obligation Bond (POB) Scenario Analysis*
3. ***Pension Obligation Bond (POB) Commentaries***
4. *Summary Q&A and References*

POB Commentaries

Government Finance Officers Association (GFOA) Advisory

The GFOA recommends that state and local governments do not issue POBs for the following reasons:

1. Invested POB proceeds might fail to earn more than the interest rate owed over the term of the bonds, leading to increased overall liabilities for the government
2. POBs carry considerable risk
3. Increases jurisdictions bonded debt burden and uses up debt capacity
4. Rating agencies may not view proposed issuance of POBs as credit positive, particularly if not part of a more comprehensive plan to address pension funding shortfalls

POB Commentaries

Government Finance Officers Association (GFOA) Advisory (cont'd)

The GFOA recommends that state and local governments do not issue POBs for the following reasons:

5. Invested POB proceeds might fail to earn more than the interest rate owed over the term of the bonds, leading to increased overall liabilities for the government

POB Commentaries

Rating Agencies

Moody's Investors Service

- **Issuance of POBs is neutral at best and usually negative for a government's credit quality**
- Currently low market interest rates and prospect of investing after a stock market correction may increase appeal of POBs, but governments would need to accept higher exposure to investment market volatility and higher long-term pension costs
- Same low interest rates that benefit governments as POB borrowers work against them and their pension systems as investors
- POBs increase issuer's exposure to market timing risk

POB Commentaries

Rating Agencies

Fitch Ratings

- **Views the impact of POBs on an issuer's credit quality to range from neutral to negative in most situations**
- POBs always carry timing and investment risk
- Issuing POBs during what (in retrospect) turns out to have been a cyclical market high reduces the likelihood of achieving savings relative to simply making full actuarial pension contributions over time
- POBs may affect a government's overall liability burden and financial flexibility and add investment risks

POB Commentaries

Rating Agencies

S&P Global Ratings

- **Views POB issuance in environments of financial distress or as a mechanism for short-term budget relief as a negative credit factor**
- In certain cases, POBs can be an affordable tool to lower unfunded pension liabilities, but along with issuance of POBs comes risk
- POB issuance potentially introduces risk to an issuer's debt and liability profile from a credit standpoint
- Poor market returns in the initial years of investment will hurt a POB's profitability for many years

Agenda

1. *Valley Water Pension Plan*
2. *Pension Obligation Bond (POB) Scenario Analysis*
3. *Pension Obligation Bond (POB) Commentaries*
4. ***Summary Q&A and References***

valleywater.org

Valley Water

Summary Q&A

Question #1

Why do government agencies issue POBs?

Answer: Agencies issue POBs with the expectation that all or a portion of its UAL can be paid down at a lower total than the cost of making annual contributions to the UAL without the use of POBs. Agencies with budget pressures often issue POBs to provide near-term budgetary relief and defer costs.

Summary Q&A

Question #2

If Valley Water contributes 100% of unfunded pension liability today, will there will be zero future liability?

Answer: Future liability may continue to increase as a result of many different factors, such as decreased investment returns, changes in future pension benefits, and changes in actuarial assumptions.

Summary Q&A

Question #3

Because interest rates are very low right now, shouldn’t issuing Pension Obligation Bonds (POBs) to fund Valley Water’s unfunded actuarial liability (UAL) result in savings in the long term?

Answer: This is a risk vs. return question. Issuing POBs today at historically low rates does not guarantee long-term savings due to many factors, particularly the potential for future decreases in investment returns. Based on our mathematical model, funding UAL assuming 2008-2019 historical returns with 6% or 7% return over all remaining years would result in $45 million in higher long-term expenses with POBs than without, for example.

Summary Q&A

Question #4

Will funding 100% of the unfunded pension liability with POBs improve Valley Water’s credit ratings?

Answer: Rating agencies view the impact of the issuance of POBs as credit neutral at best, and at worst is seen as a credit negative.

Reference List

Actuarial Valuation as of June 30, 2018 for the Miscellaneous Plan of the Santa Clara Valley Water District, Required Contributions for Fiscal Year July 1, 2020 - June 30, 2021. CalPERS, July 2019.

"CalPERS Trust Level Quarterly Update – Performance & Risk. Public Employees' Retirement Fund (PERF) as of December 31, 2019." *CalPERS*, www.calpers.ca.gov/page/investments/asset-classes/trust-level-portfolio-management/investment-fund-values. Accessed 1 June 2020.

"Investment & Pension Funding, Facts at a Glance for Fiscal Year 2018-19." *CalPERS*, www.calpers.ca.gov/page/about/organization/facts-at-a-glance. Accessed 1 June 2020.

Low interest rates do not insulate governments from pension bond risks (Sector In-Depth). Moody's Investors Service, 24 Apr. 2020.

Reference List (continued)

“Pension Obligation Bonds (Advisory).” *Government Finance Officers Association*, Jan. 2015, www.gfoa.org/pension-obligation-bonds. Accessed 1 June 2020.

Pension Obligation Bonds’ Credit Impact on U.S. State and Local Government Issuers. S&P Global Ratings, 6 Dec. 2017.

Pension Obligation Bonds – Weighing Benefits and Costs (Comment). Fitch Ratings, 31 Mar. 2015.

QUESTIONS

Valley Water

Clean Water • Healthy Environment • Flood Protection