CalPERS Update
League of California Cities

Marcie Frost
CalPERS, Chief Executive Officer

September 22, 2021
Fiscal Year Financial Status (as of 6/30/21)

$469 billion in assets
(from $389b)

21.3% net return on investments
(from 4.7%)

82% funded status
(from 71%)

50-60% 70-80% 90-100%
### Total Net Investment Returns Over Time

<table>
<thead>
<tr>
<th>Time</th>
<th>Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 year</td>
<td>8.4%</td>
</tr>
<tr>
<td>20 year</td>
<td>6.9%</td>
</tr>
<tr>
<td>10 year</td>
<td>8.5%</td>
</tr>
<tr>
<td>5 year</td>
<td>10.3%</td>
</tr>
<tr>
<td>1 year</td>
<td>21.3%</td>
</tr>
</tbody>
</table>

*(As of fiscal-year ending 6/30/21)*
Challenges to Achieving Target Returns

U.S. Treasury Yields Reduced to Near Zero

![Graph showing rate and return percentages for low and higher risk assets, with notes on 10Y Treasury and PERF 10Y Rolling Return and Discount Rate.]

CalPERS
## Capital Market Assumptions: Survey Results

<table>
<thead>
<tr>
<th>Survey Parameter</th>
<th>2017 ALM</th>
<th>2020 Mid-Cycle ALM Survey Median Value 03/31/20</th>
<th>2021 Second ALM Survey Median Value 03/31/21</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10-Year Expectations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Return</td>
<td>6.1%</td>
<td>5.7%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Expected Risk</td>
<td>11.4%</td>
<td>10.5%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Expected Return/Risk</td>
<td>0.54</td>
<td>0.54</td>
<td>0.47</td>
</tr>
<tr>
<td><strong>20-Year Expectations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Return</td>
<td>7.0%</td>
<td>6.6%</td>
<td><strong>6.2%</strong></td>
</tr>
<tr>
<td>Expected Risk</td>
<td>11.4%</td>
<td>10.5%</td>
<td>11.3%</td>
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<tr>
<td>Expected Return/Risk</td>
<td>0.73</td>
<td>0.63</td>
<td>0.55</td>
</tr>
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</table>
Strategic Investment Approach

- Long-term horizon approach
- Access to private markets
- Shareholder advocacy

Long-term horizon approach

Access to private markets

Shareholder advocacy
Three Key Risks

- Investment Risk
- Sustainability
- Employer Affordability
Purpose of Funding Risk Mitigation Policy

- Lowers the discount rate in years of very good investment returns
- Lowers investment volatility over time
- Provides greater predictability and less volatility in contribution rates for employers
Risk Mitigation Policy Sample Scenarios

If investment returns outperform discount rate by:

- +2 pp → 9% → 6.95%
- +7 pp → 14% → 6.90%
- +10 pp → 17% → 6.85%
- +13 pp → 20% → 6.80%
- +17 pp → 24% → 6.75%

From Risk Mitigation Policy triggering
Risk Mitigation Policy and Asset Liability Management (ALM)

- Risk Mitigation Policy
- Discount rate & asset allocation selection
- Asset Liability Management process
Balancing Risk & Reward

% of Private Assets

% of Leverage

Tolerance for Drawdown Risk

Volatility
Current Portfolio: Status Quo

Necessitated Discount rate: 6.25%, Projected Return: 6.2%

<table>
<thead>
<tr>
<th>Time Horizon</th>
<th>Projected Return</th>
<th>Drawdown Risk</th>
<th>Volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Years</td>
<td>6.2%</td>
<td>22.6%</td>
<td>11.2%</td>
</tr>
<tr>
<td>Near-term</td>
<td>5.2%</td>
<td>23.6%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Long-term</td>
<td>6.6%</td>
<td>22.3%</td>
<td>11.3%</td>
</tr>
</tbody>
</table>

In comparison to other candidate portfolios:

Pros
- No changes, no added complexity
- No policy changes required

Cons
- Lowest return for similar risk levels
- Lower projected returns in near-term horizon
- Lower diversification
- Higher projected contributions

Returns are geometric and net of estimated administrative expenses of .10% (10 basis points).
Candidate Portfolio C: higher risk/return, diversified

Discount rate: 6.75%, Projected Return: 6.8%

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<thead>
<tr>
<th>Time Horizon</th>
<th>Projected Return</th>
<th>Drawdown Risk</th>
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</thead>
<tbody>
<tr>
<td>20 Years</td>
<td>6.8%</td>
<td>22.9%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Near-term</td>
<td>6.2%</td>
<td>26.3%</td>
<td>12.6%</td>
</tr>
<tr>
<td>Long-term</td>
<td>7.0%</td>
<td>22.0%</td>
<td>11.6%</td>
</tr>
</tbody>
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In comparison to other candidate portfolios:

**Pros**
- Higher returns than current portfolio
- Lower contributions

**Cons**
- Private asset deployment requires policy changes.
- Potential increased exposure to ESG issues
- Higher contribution and funding risk compared to portfolio A and current portfolio

Returns are geometric and net of estimated administrative expenses of .10% (10 basis points).
Candidate Portfolio D: higher risk/return, diversified, 5% leverage

Discount rate: 6.75%, Projected Return: 6.8%

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<tr>
<td>20 Years</td>
<td>6.8%</td>
<td>22.1%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Near-term</td>
<td>6.4%</td>
<td>27.2%</td>
<td>13.0%</td>
</tr>
<tr>
<td>Long-term</td>
<td>7.0%</td>
<td>20.8%</td>
<td>11.1%</td>
</tr>
</tbody>
</table>

In comparison to other candidate portfolios:

Pros

- Higher returns than current portfolio
- In the long-term, more diversification than unlevered
- Lower contributions

Cons

- More complexity with leverage
- Private asset deployment requires policy changes
- Potential increased exposure to ESG issues
- Higher contribution and funding risk compared to portfolio A and current portfolio

Returns are geometric and net of estimated administrative expenses of .10% (10 basis points).
Candidate Portfolio E: highest risk/return, diversified, 5% leverage

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<td>20 Years</td>
<td>7.0%</td>
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<td>12.5%</td>
</tr>
<tr>
<td>Near-term</td>
<td>6.4%</td>
<td>28.2%</td>
<td>13.4%</td>
</tr>
<tr>
<td>Long-term</td>
<td>7.2%</td>
<td>23.6%</td>
<td>12.2%</td>
</tr>
</tbody>
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Discount rate: 7.0%, Projected Return: 7.0%

In comparison to other candidate portfolios:

Pros
- Highest projected return at 7.0%
- Highest discount rate
- Lowest projected contributions

Cons
- 7.0% return target not feasible without 5% leverage
- Private asset deployment requires policy changes
- Potential increased exposure to ESG issues
- Higher portfolio, contribution and funding risk compared to portfolio A and current portfolio

Returns are geometric and net of estimated administrative expenses of .10% (10 basis points).
Impact on Employer Contribution Rates: **Sample City**

### Sample City (Medium Funded Status)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Employer Contribution Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022-23</td>
<td>7.000%</td>
</tr>
<tr>
<td>2023-24</td>
<td>6.750%</td>
</tr>
<tr>
<td>2024-25</td>
<td>6.375%</td>
</tr>
<tr>
<td>2025-26</td>
<td>6.250%</td>
</tr>
<tr>
<td>2026-27</td>
<td>6.250%</td>
</tr>
<tr>
<td>2027-28</td>
<td>6.250%</td>
</tr>
</tbody>
</table>

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Impact on Employer Contribution Rates: **Sample Safety Plan**

Sample Safety (Medium Funded Status)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>2022-23</th>
<th>2023-24</th>
<th>2024-25</th>
<th>2025-26</th>
<th>2026-27</th>
<th>2027-28</th>
</tr>
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<tbody>
<tr>
<td>Employer Contribution Rate</td>
<td>7.000%</td>
<td>6.750%</td>
<td>6.375%</td>
<td>6.250%</td>
<td>Base</td>
<td>Base</td>
</tr>
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</table>

- **7.000%**
- **6.750%**
- **6.375%**
- **6.250%**

Fiscal Year:
- 2022-23
- 2023-24
- 2024-25
- 2025-26
- 2026-27
- 2027-28
Potential Impact to PEPRA Contribution Rates

Will Employees Be Affected?

- **Normal cost base rate**
- **If discount rate increases normal cost base rate by 1% or more**

**No**
- Employee contribution stays the same

**Yes**
- Employee contribution goes up—shares 50% of increase with employer
Potential PEPRA Rate Increases

Keys to Remember

• All employees hired after Dec. 31, 2012
• Employees pay 50% of the Normal Cost, with 1% increase threshold
• New MOUs cannot lower 50% cost-share, but can increase it
• Further communication coming when ALM completed
• Contact CalPERS for your plans’ specifics

Opportunities for Stakeholder Engagement

2021
February
- Educational sessions:
  o ALM concepts and framework
  o ALM timeline

June
- Review of economic climate

July*
- Capital Market Assumptions
- Educational sessions:
  o ALM process and framework
  o Investment funds risk assessment
  o Gauging the funds' ability to tolerate market risk

September
- Discussion of candidate portfolios with proposed discount rates
- Draft Experience study results (first reading)

November
- Experience study results
- Discussion of candidate portfolios with discount rates
- Adopt new actuarial assumptions
- Adopt new economic assumptions
- Final approval of discount rate
- Final approval of strategic asset allocation

2022
July*
- Effective date for strategic asset allocation

Quarterly stakeholder webinars throughout the ALM process:
January 20, April 27, August 3, and October TBD 2021

* Board offsite
November Board Preview

• CIO Search

• Health care plan design

• COVID and CalPERS operations

• Diversity, equity, and inclusion framework

• Upcoming public agency election – April 2022

• Educational Forum Online – October 19-20 – free registration now open
Ongoing communication
Listening to employers
Partnerships
Here for you
Q&A

CalPERS Stakeholder Relations@calpers.ca.gov