Media Workshop

Media Tool Kit and Q&A

Sept. 18, 2018
Defined Benefit (DB): provides beneficiaries predefined, guaranteed benefit based on years of service, final salary, age, and benefit formula; risk borne largely by employer

Example: 2% @ 60 provides 2% of final compensation * years of service
—Final salary $50,000
—Years of service 30
Year 1 benefit: $50,000 * 2% * 25 = $25,000
Typically contains annual COLA

Defined Contribution (DC): provides beneficiaries benefit that is not pre-determined and is dependent upon the account balance at retirement; risk borne largely by beneficiary

Actuarial Basis: assets and accrued liability as they are determined by the pension systems themselves

Market Basis: market value of assets; discounts future benefit payments for the time value of money using the yield on 20-year United States Treasury bonds
Market Value of Assets (MVA): current or estimated value of assets, other property

Actuarial Value (AVA): Assets “smoothed” to minimize effects of volatility (Note: CalPERS no longer uses.)

Actuarial Accrued Liability (AAL): present value of fully projected benefits attributable to service credit earned (or accrued) as of the valuation date; typically “Entry Age Normal Accrued Liability”
—CalPERS defines as: “projected benefits are determined for all members and the associated liabilities are spread in a manner that produces level annual cost as a percentage of pay in each year from the member’s entry age to their assumed retirement age on the valuation date.”

Funded ratio = \( \frac{\text{Market Value of Assets (MVA)}}{\text{Actuarial Accrued Liability (AAL)}} \)

Unfunded Actuarial Accrued Liability (UAAL): excess of the total actuarial accrued liability over the market value of plan assets (aka “Pension Debt”)

Discount Rate: assumed rate of return and rate at which future liabilities are discounted

Risk Free Rate: generally assumed to be U.S. 20-Year Treasury yield, currently just over 2.5%
Media Toolkit: Actuarial Terms, Palo Alto Miscellaneous Plan, 2016

Funded ratio:
\[
\frac{\text{Market Value of Assets (MVA)}}{\text{Actuarial Accrued Liability (AAL)}} = \frac{469}{730} = 64.2\%
\]
Media Toolkit: Contribution Rates and Contributions

**Actuarial**

**Contribution Rates**
— Typically expressed as a percentage of payroll
— Employer: typically set annually to achieve full-funding over time
— Employee: typically set in statute to a maximum amount

**Contribution Amounts**: sum of contribution rates * payroll

**(Covered) Payroll**: individual or aggregate payroll on which contribution rates are determined

**Normal Cost**: cost of projected benefits allocated to the current plan year

**Unfunded Liability Contribution**: cost of reducing unfunded liability to zero

**Amortization period**: time period over which Unfunded Actuarial Liability is reduced to zero

**Annual Required Contribution (ARC)**: employer’s contribution to fully fund system
### Normal Cost Contribution as a Percentage of Payroll

<table>
<thead>
<tr>
<th>Contribution</th>
<th>Fiscal Year 2017-18</th>
<th>Fiscal Year 2018-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Normal Cost</td>
<td>17.623%</td>
<td>17.697%</td>
</tr>
<tr>
<td>Employee Contribution</td>
<td>7.584%</td>
<td>7.480%</td>
</tr>
<tr>
<td>Employer Normal Cost</td>
<td>10.039%</td>
<td>10.217%</td>
</tr>
</tbody>
</table>

Projected Annual Payroll for Contribution Year: $78,211,742 $82,332,567

### Estimated Employer Contributions Based On Projected Payroll

<table>
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<tr>
<th>Contribution</th>
<th>Fiscal Year 2017-18</th>
<th>Fiscal Year 2018-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Normal Cost</td>
<td>$13,783,255</td>
<td>$14,570,395</td>
</tr>
<tr>
<td>Employee Contribution</td>
<td>$5,931,579</td>
<td>$6,158,476</td>
</tr>
<tr>
<td>Employer Normal Cost</td>
<td>$7,851,676</td>
<td>$8,411,919</td>
</tr>
</tbody>
</table>

Unfunded Liability Contribution:
- % of Projected Payroll (illustrative only): 20.157% (20.0157%), 22.339% (22.3389%)

Estimated Total Employer Contribution:
- % of Projected Payroll (illustrative only): 30.196% (30.1937%), 32.556% (32.5526%)

Media Toolkit: Metrics

Unfunded liability per member = \( \frac{\text{AAL - MVA, or UAAL}}{\text{Number of active, retired, vested members}} \)

Unfunded liability per capita = \( \frac{\text{AAL - MVA, or UAAL}}{\text{Number of persons}} \)

Unfunded liability per household = \( \frac{\text{AAL - MVA, or UAAL}}{\text{Number of occupied housing units}} \)