State and local government pension liabilities falling as rates rise, but assets losing ground
Pension and retiree health care liabilities remain some governments’ most substantial obligations

» As of March 2022, the Federal Reserve reported...
  - State and local government debt securities: $3.2 trillion
  - State and local government unfunded pensions: $3.8 trillion

» We estimate unfunded OPEBs (primarily retiree health care) at ~$1 trillion

» Pensions are “must-pay” obligations
  - Governments frequently have more legal flexibility to cut OPEBs, but may still face practical limitations

Scale of liabilities varies dramatically

Source: Moody’s Investors Service
Heavy concentration of pension assets in equities and alternatives → high volatility risk

10 largest retirement systems

2022 risk-return map

Source: Moody's Investors Service
FY ‘22 investment losses → reversal of gains in ‘21
But rising interest rates → lower mark-to-market liabilities

<table>
<thead>
<tr>
<th></th>
<th>Actual 2019</th>
<th>Actual 2020</th>
<th>Estimated 2021</th>
<th>Projected 2022</th>
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<tbody>
<tr>
<td>Pension measurement date</td>
<td>6/30/2019</td>
<td>6/30/2020</td>
<td>6/30/2021</td>
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<td>Report Net Pension Liability</td>
<td>$39.8</td>
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<td>Annual % change</td>
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<td>Report discount rate</td>
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<td>Moody’s Adj. Net Pension Liability</td>
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<td>Adj. discount rate</td>
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<td>Investment Returns (%)</td>
<td>6%</td>
<td>2%</td>
<td>24%</td>
<td>-12%</td>
</tr>
</tbody>
</table>

Sources: State of Connecticut, Moody’s Investors Service
Inflation can drive up pension liabilities and costs through wage increases and COLAs

» Inflation → higher wage growth in new contracts
  - Wage growth above assumptions: “actuarial losses”
  - Higher wage assumptions: higher “normal costs” and liabilities

» Cost-of-living adjustments (COLAs) revisited?
  - COLA changes a frequent source of liability reduction over past decade-plus
  - Unwinding past changes or new benefits: risk of higher liabilities

Sources: New York State & Local Retirement System, St. Louis Federal Reserve, Moody’s Investors Service
Medical cost inflation stands to increase OPEB liabilities and costs

Sources: County of Los Angeles, Moody’s Investors Service

Sources: County of Los Angeles, Los Angeles County Employees Retirement Association
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