Long-Term Pension Policy Considerations with an Aging Population

Leslie Thompson and Paul Wood

Public sector pension plans, already under intense scrutiny, face a new and evolving challenge of dealing with an aging population. By understanding the implications of an aging population, the ever-changing demands of the public sector workforce can be addressed.

Living longer has been a boon to all recent generations and the expectation remains that succeeding generations will continue to outlive the previous ones. As shown in the following table, life expectancy has improved remarkably over the last half century.

<table>
<thead>
<tr>
<th>People Born in the Period</th>
<th>Life Expectancy at Birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-1955</td>
<td>68.6 years</td>
</tr>
<tr>
<td>1980-1985</td>
<td>74.3 years</td>
</tr>
<tr>
<td>2005-2010</td>
<td>78.1 years</td>
</tr>
</tbody>
</table>

Source: GAI SOA Longevity Webcast Richard Jackson, President, February 3, 2016; UN Population Division (2013).

An aging population and low fertility rates are two major demographic challenges facing the world today and, more specifically, U.S. public sector pension plans. Both of these challenges create a rising fiscal burden whose effects reverberate through all public sector populations. Risk pooling for retirement and health care benefits begins to lose its effectiveness as populations tilt more toward the aged person whose life expectancy is increasing with each future generation.

As public sector pension populations continue to age, the period of time over which benefit payments will be paid becomes more critical. This payment period is a function of the life expectancy of the retirees. The following chart shows life expectancy at ages 65 and 75 for the indicated year of birth.

Life expectancy at age 65 for the general population (both genders, all races) has increased nearly 11 months for every decade since 1980. Similarly, the life expectancy at age 75 for the general population has increased nearly six months for every decade since 1980. In the future, the public sector retired population may exhibit a greater improvement in life expectancy.

Improved life expectancy has significant economic implications on the financing of defined benefit (DB) pension plans. For example, if a plan valued liabilities based on the life expectancy for 1980, but the actual life expectancy was updated to the life expectancy for 2010, then the plan would end up paying nearly three more years of benefit payments than expected. As a result, there will be about 13% more benefit payments and liabilities than anticipated.

**Rising Fiscal Burden**

Longer life expectancy and lower fertility rates combine to create a demographic force that will increase the fiscal burden on retirement and retiree health care programs. The strain on any given pension system and any subsequent changes related to that strain will be a function of the increase in the fiscal burden. The fiscal burden generally represents the amount of budget displacement (taking budget dollars away from other items) that will need to occur to meet the needs of the retirement program.

On a national level, this can be illustrated by analyzing the anticipated rise in costs of public benefits of the elderly (age 60 and over) as a percent of the U.S. Gross Domestic Product (GDP). Total public benefits of the elderly as a percent of the GDP are shown in the following table:

<table>
<thead>
<tr>
<th></th>
<th>Social Security</th>
<th>Health Care</th>
<th>Other</th>
<th>Total</th>
<th>Social Security</th>
<th>Health Care</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of GDP</td>
<td>2010</td>
<td>2040</td>
<td>2010</td>
<td>2040</td>
<td>2010</td>
<td>2040</td>
<td>2010</td>
<td>2040</td>
</tr>
<tr>
<td></td>
<td>4.8%</td>
<td>6.4%</td>
<td>5.1%</td>
<td>11.0%</td>
<td>1.2%</td>
<td>1.1%</td>
<td>11.1%</td>
<td>18.5%</td>
</tr>
</tbody>
</table>

*Source: GAI SOA Longevity Webcast Richard Jackson, President, February 3, 2016; UN Population Division (2013).*

As shown, total public benefits of the elderly are expected to increase as a percent of GDP from 11.1% in 2010 to 18.5% in 2040.

**Economic Slowdown Means Less Funds for Retirees**

As with any economic system, a percentage increase in one area of the budget typically means a decrease in other areas. A future of slower economic growth and slower growth in the workforce, equates to slower growth in the GDP. This, in turn, implies a contraction of resources available for pension and health care spending. Further, this slow growth will also lead to a slowdown in productivity and a commensurate slowdown in the growth of a person’s standard of living. Future generations of retirees may not be as financially stable in retirement as previous generations.

The tightening of the capital markets may also signify a reduction in the rates of return that may be earned by a DB plan, which could lead to higher contributions from both members and employers. In addition, increased volatility may occur in DB plan portfolios as plan sponsors seek out ways to enhance the returns in the funds. When demographics create a slowdown in the growth of the economy, pay-as-you-go systems (i.e., Social Security) are also put at risk. This is due to the fact that these systems fund a vast majority of current period benefits paid to retirees from active member contributions. There needs to be a sufficient number of actives making contributions to the plan to fund the current retirement benefits. The low fertility rate combined with the increasing life expectancy of retirees puts a strain on this economic system.

A timely example of this situation would be the Social Security System in the U.S. The total trust fund reserves of Social Security are projected to be depleted by 2034. Thereafter, the available tax income will pay for approximately 75% of scheduled benefits until 2090. This means that future retirees face the possibility of cuts to their Social Security benefits, absent an increase in the payroll tax.

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1 *Social Security and Medicare Boards of Trustees, Status of the Social Security and Medicare Programs, A Summary of the 2016 Annual Reports (https://www.ssa.gov/oact/trsum).*
Sustainable yet Not Adequate Is as Unappealing as Adequate yet Not Sustainable

The market meltdown of 2008 created a heightened awareness of the risks and underlying policies for retirement plans. Many employers sought to design plans that were more affordable while others wrestled with the issue of whether the plans created an adequate retirement benefit for the member.

Looking forward, over a 20- to 30-year period, pension policies may need to change in order to respond to the future economic and demographic environment. While no one can forecast the future with 100% certainty, the time is now to begin to make changes that will ease the strain associated with these changing conditions. The changes will be a true optimization challenge that balances potential increasing costs and the related budget pressures, while helping employees accrue retirement income that maintains an adequate standard of living and is sustainable to last a lifetime.

Addressing the Retirement Needs of the Public Sector Workforce

A slowing economy means tight budgets for all and less ability to manage volatile risks and changes in budgets. Public sector workers, similar to their private sector counterparts, will be facing a potential reduction in Social Security benefits if Social Security makes up the projected deficit through benefit reductions. Although retirement systems cannot address the macroeconomic demands of our social insurance system, they can take steps now to minimize the risks to their own members. The following suggestions represent long-term strategies for the protection of the economic needs for both members and employers:

1) **Use the appropriate plan structure for the appropriate risk and need**
   - DB plans provide a secure lifetime income, protecting retirees from investment and longevity risk; and
   - Defined contribution (DC) plans provide a savings vehicle and may provide variable income throughout the course of a member’s retirement.

2) **Create a clear focus on the protection of the base annuity benefit and use DC plans for variable income**
   - DC plans may fund for variable cost-of-living adjustments (COLA) income, retiree medical subsidies and/or early retirement; and
   - DC plans may also be available to fund retirees’ economic shocks and unexpected expenses in retirement.

3) **Keep actuarial assumptions up to date. In particular, keep the mortality tables updated and include the liabilities associated with future improvements in mortality**
   - May accomplish this through the use of fully generational mortality tables; and
   - Annually analyze the liability gains and losses on mortality, and set the mortality tables so that margin exists for mortality improvements and future generations will not have to suddenly pay for improvements in life expectancy.

4) **Link the period of a member’s contribution to the period of retirement by lengthening the time until an unreduced retirement benefit is earned**
   - To offset increases in life expectancy since 1980, on average a plan would need to increase the retirement age by three years; and
   - To offset decreases in the ratio of actives to retirees, the retirement age would need to increase by seven years.

5) **Reduce benefit multipliers**
   - Use a formula that would expect a longer career service period so a similar lifetime benefit is earned, but over a longer career.

6) **Review the funding policy to eliminate inter-generational transfers**
   - Annually monitor the changes in the unfunded accrued liability and its principle pay-off; and
   - Use multi-year projections to monitor the effects of amendments and gains/losses on the anticipated date for full funding.

7) **Consider implementing a risk measurement framework**
   - Review the funding policy, benefit policy and investment policy in a broader risk assessment context; and
   - Develop risk measurement tools to aid in regular assessments (such as asset allocation studies, asset liability modeling studies, automatic benefit and/or funding changes that respond to risk).
Conclusion

Demographic challenges, such as increased life expectancy and low fertility rates, place a tremendous amount of pressure on the economic system as a whole. This pressure is felt by many, if not all, public sector retirement systems. These systems are faced with the prospect of lowering costs while at the same time providing meaningful and sustainable retirement income. Plan sponsors should consider strategies that address the retirement needs of the public sector workforce.

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