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**SOCIAL INSURANCE  
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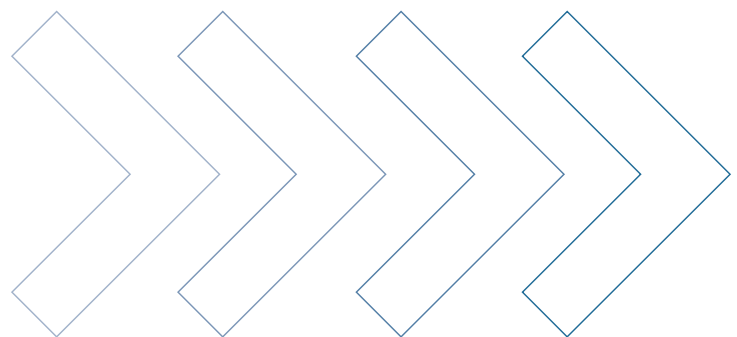
# In The Public Interest

ISSUE 16 • JANUARY 2018

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# Letter from the Editor

By Jeffery M. Rykhus

**H**appy New Year, 2018. As we look back, it has been a tumultuous year in Social Insurance. As I write this letter, I look forward to the outcome of the Affordable Care Act (ACA) open enrollment period. There have been so many potential and actual game-changers in health care this year that it will be interesting to see who will remain in ACA plans after the shortened enrollment period ends. Certainly huge cost increases are a continuing concern for many friends who pay for their own individual health insurance and live in Los Angeles. The cost of health insurance is even higher and more unsustainable for relatives of mine in South Dakota. I think both actuaries and non-actuaries agree that changes to control the high price of health insurance are necessary.

This issue opens with an article by Jason Clarkson, Rob Damler and Amanda Schipp that describes Medicaid work requirements, “Medicaid Work Requirements: Overview of Policy and Fiscal Considerations.” At the National Association of Medicaid Directors meeting, administrator Seema Verma announced the administration’s plans to begin allowing work requirements to be included in Medicaid waiver programs. This topic was discussed at many of the breakout meetings. The announcement from administrator Verma was covered in many national articles. I believe this is an extremely timely article, given this announcement.

The second article, “Social Security Changes for 2018,” by Bruce Schobel, is a reprise of his standard end-of-the-year article that describes all the automatic changes that are required by current law, and it’s good to know those, given our section mission. I

always find something new to focus on in Bruce’s writing, and in this article I find it odd to note that the National Average Wage statistic **excludes** wages earned in self-employment status.

You will now be able to read the conclusion of our current public pension series, part II of “Appropriateness of Risk-Taking by Public Pension Plans,” by Don Boyd and Yimeng Yin. The article continues to discuss the inherent conflict between the research that suggests a higher proportion of public pension plan assets should be held in fixed income and less in equities and the continual chase for higher returns for these public plans.

As a little morsel to whet your appetite for the whole article, Boyd and Yin sum up their article with the following words:

There are two things that policymakers can do that would be important steps toward confronting the situation. First, policymakers should explore ways to change and counter the incentives and institutions that encourage U.S. public pension funds to take risk. Second, public pension funds should ensure that they analyze and communicate the risk they are taking, in ways that can be understood not just by their boards, but by the governments that contribute to their funds, and by the public that ultimately bears the risks they take.

Anna Rappaport closes this issue with her article about the Living to 100 Symposium in “Long Life Can Have a Big Effect on Public Finance.” She discusses many of her perspectives on the 2017 symposium and the overall efforts made in the series of six symposia that have so far occurred, since 2002.

May you all be blessed and achieve great things in 2018. ■



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# Chairperson's Corner: The Social Insurance Environment

By Bruce D. Schobel

**M**y predecessor as Social Insurance and Public Finance (SIPF) Section chair, Steve Bryson, said the following in his first Chairperson's Corner (March 2017):

The Social Insurance and Public Finance Section is fairly unique in the universe of SOA sections. Unlike many other sections, our primary focus is not on supporting our members' practices. There's nothing wrong with that, of course, and I certainly don't mean to imply that we are in any respect superior or more important than other SOA sections. But I do appreciate that our *raison d'être* is to do what we can as actuaries to improve the financial health of our public security systems, and, in the pursuit of that goal, somehow make this planet a better place in which to live.

That excellent beginning led me to think that, not only is our section different, but so is our whole environment. What makes the social insurance and public finance world different from so many other areas in which actuaries work? At some risk of oversimplifying, I summarize my thoughts below, focusing on the United States, but the principles apply just about everywhere:

- In my 44 years of actuarial work—yes, it's been that long!—the private-sector actuarial environment has become increasingly regulated and constricted. After starting my first actuarial job in January 1974, I watched eight months later (on Labor Day) as brand-new President Gerald Ford signed into law long gestating pension legislation known as ERISA. Over the years, as ERISA has been amended countless times, generally expanded in scope, clarified and interpreted by thousands of regulations from multiple Federal agencies, actuaries have seen the range of acceptable assumptions and methods shrink smaller and smaller. Life and health insurance have been somewhat less heavily regulated than pensions, but the direction has been pretty much the same. Actuaries can still innovate, of course, but usually within a tightly confined space defined by a cornucopia of rules written by legislators and their appointed regulators.
- In contrast, the world of social insurance and public finance is relatively unregulated and subject to fewer risks. That surprises many observers, but it's true. Governments often (even routinely) exempt themselves from various laws and regulations that are imposed on the private sector. Social insurance benefits (such as Social Security and Medicare in the United States) are provided pursuant to laws, rather than binding contracts, and laws can be changed, as the courts have said many times. Future benefits can be reduced as necessary, and governments can impose mandatory taxes if they choose to meet the need for additional financing that way. The Federal Government can even print money! What greater power can there be? Participation in social insurance is generally mandatory or so heavily subsidized that only the foolish opt out. Anti-selection is impossible or just a minor concern. Employers are required to assist in program administration,



withholding social insurance taxes from their employees' paychecks pursuant to rigidly enforced laws. Governments have little or no marketing expenses. Such a different world. And that's hardly a complete list.

But social insurance and public-sector benefit plans have a completely different set of restrictions that create their own kind of risks, and actuaries who work in these areas need to be aware of those. The greatest risks are political in nature, not financial. Take the U.S. Social Security program, as just one example: Its future financial problems have been laid out in great detail by at least 30 consecutive, highly consistent, annual Trustees Reports from both Democratic and Republican administrations. All of them have presented fundamentally the same projections, ignoring inconsequential wiggles. And the solutions to those future problems are just as well understood. Even casual observers can recite a laundry list of potential solutions, from raising taxes (rates and/or the base) to raising the retirement age and so on and so on. Nothing new will be discovered. But the United States seems unable to generate the political will to restore this critical

program to close actuarial balance. Legislators just keep deferring the problem, leaving it to their successors. That's a problem itself, as deferral keeps lopping branches off the available tree of options. Some reasonable changes just aren't effective if you make them at the last minute.

As we enter another year of exploring this very different world, I hope that you, section members, will lend your voices and insights to our efforts. Write articles for our newsletter, which you are now reading. Participate in our meeting sessions and webcasts. Invite other actuaries who are unfamiliar with our world to learn more about it. Together, as Steve Bryson said a year ago, we can "somehow make this planet a better place in which to live." I look forward to seeing our progress during 2018. ■



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# Medicaid Work Requirements: Overview of Policy and Fiscal Considerations

By Jason Clarkson, Amanda Schipp and Rob Damler

Since the passage of the Patient Protection and Affordable Care Act (ACA) in 2010, the number of uninsured Americans has dropped to historic lows.<sup>1</sup> The ACA's expansion of Medicaid to low-income adults with incomes up to 138 percent of the federal poverty level (FPL) has also significantly increased Medicaid enrollment in states that have elected to expand Medicaid. These expansion states are estimated to have experienced a 45 percent decrease in uninsured rates between 2010 and 2015, compared to a 30 percent decrease for states that did not expand Medicaid.<sup>2</sup>

While most states have experienced significant decreases in uninsured rates, Medicaid expansion has left some states with financial challenges. 2017 has marked the first year these states have been required to share in the cost of the expansion, as federal financial participation has dropped to 95 percent, and it will decrease to its long-term rate of 90 percent in 2020. Now that states are required to share in financing coverage for the expansion population, some states are seeking innovative ways to control costs, while attempting to maintain provider access and improve population health for newly eligible Medicaid beneficiaries. To assist in alleviating these financial challenges, states are considering Section 1115 Demonstration Waivers (Section 1115) to introduce new policies, including work requirements, aimed at helping newly enrolled adults transition off Medicaid. While Section 1115 and Medicaid work requirements have the potential to decrease a state's Medicaid expenditures and improve workforce participation rates, they can also be controversial. This article summarizes the current status of proposed employment initiatives and outlines important considerations for states.

As of the date this article was drafted, the Centers for Medicare and Medicaid Services (CMS) had never approved a work requirement for Medicaid; however, such Medicaid employment initiatives may be favorably viewed under the Trump administration. In March 2017, the Department of Health and Human Services (HHS), together with CMS, jointly issued a letter to

governors affirming the agencies' commitment to supporting state innovation, including support for innovations aimed at increasing employment and community engagement among Medicaid beneficiaries.<sup>3</sup> Specifically, the letter stated:

The best way to improve the long-term health of low-income Americans is to empower them with skills and employment. It is our intent to use existing Section 1115 demonstration authority to review and approve meritorious innovations that build on the human dignity that comes with training, employment and independence.

Several states have introduced employment initiatives as part of their respective Medicaid programs; the states include Arkansas, Indiana, Kentucky, Maine, Utah and Wisconsin. Unlike SNAP and TANF program work requirements, which are established at the federal level, states have flexibility through a Section 1115 waiver to design Medicaid-focused employment programs in ways that meet their individual unique challenges and needs. The various employment initiatives proposed to date illustrate the flexibility of Section 1115.

States are looking at related existing programs to help inform and implement their employment programs. For example, a few states are seeking to design employment programs that align with existing SNAP and/or TANF employment and training programs.<sup>4,5</sup> Programs intended to help SNAP, TANF, or Medicaid expansion populations soon become familiar with the additional barriers most beneficiaries face in their quest to find long-term gainful employment. These may include finding stable housing, quality child care, education, and treatment for mental illness or substance abuse. To be successful, programs should make a long-term commitment to helping beneficiaries overcome these challenges. Given the complexity of designing effective employment initiatives, states with managed care may leverage the expertise of the managed care organizations to design and operate their employment programs. To provide additional motivation, states are requesting new eligibility limitations linked to work. For example, Wisconsin's unique proposal<sup>6</sup> seeks to add a finite Medicaid enrollment limit (four years); however, months in which

## SECTION 1115 DEMONSTRATION WAIVERS

States can utilize Section 1115 Demonstration Waivers to receive approval from CMS to implement new innovative policy initiatives, including eligibility changes, service coverage changes, and service delivery reforms. For additional information, please visit <https://www.medicaid.gov/medicaid/section-1115-demo/index.html>

beneficiaries are employed or participating in employment and training programs do not count toward the enrollment limit.

Despite its general support for work initiatives, to date, CMS has not approved or denied any of the proposed work programs, temporarily leaving states wide latitude to develop unique programs to support employment initiatives within their specific Medicaid programs.

## POLICY AND FISCAL CONSIDERATIONS

The Section 1115 waiver provisions appear to give states considerable flexibility in designing programs to develop employment initiatives for Medicaid enrollees. States pursuing these policy initiatives must address several fundamental program design elements.

### Mandatory VS. Voluntary Participation

While CMS is currently considering several mandatory work requirement proposals, several states that have chosen to expand Medicaid are already operating voluntary employment and training programs for newly eligible adults. Medicaid enrollees who are unemployed or under-employed are connected to existing employment and training resources. As CMS gives states more flexibility, it is likely that more states will seek to strengthen these programs. For example, in summer 2017, Indiana amended<sup>6</sup> its pending Section 1115 application to make participation in its voluntary Gateway to Work program mandatory for certain beneficiaries.

While a simple choice between voluntary and mandatory participation is one option, more complex policy options are also possible. For example, an employment program could be voluntary but require participation as a condition for recipients to access certain enhanced benefits. The design structure could vary for different Medicaid eligibility categories or by federal poverty level. Some common design structure options include:

- Require participation as a condition of eligibility.
- Require participation a condition of receiving incentives (such as enhanced benefits, monetary incentives, reduced cost sharing).
- Require participation as a condition of avoiding penalties (such as increased premiums for non-participation).
- Make participation entirely voluntary.

### Participating Populations

State policy makers must define what segment of their Medicaid population will be included in the work and employment training initiative. Although most states have targeted primarily the population newly enrolled under Medicaid expansion, several states have also sought to include other “able-bodied” Medicaid

Section 1115 waiver provisions appear to give states considerable flexibility. ...

eligibility groups, namely those individuals who obtain Medicaid eligibility because of low income rather than disability.

When evaluating the populations proposed to participate in Medicaid work and employment training initiatives, it is important to consider employment rates within each participating population. For states that have not expanded Medicaid under the ACA, Medicaid programs serve primarily children, caretakers, and the medically frail, groups for whom having a job is generally not practical. As a result, aggregate Medicaid employment rates are materially lower in non-expansion states than in states that have expanded Medicaid.

Table 1 contains a summary of the employment status of Medicaid populations in expansion and non-expansion states. In developing these estimates, we limited the population to adults eligible for Medicaid but not for Medicare (i.e., non-dual). This equates to approximately 40 percent of the total Medicaid population.

Table 1  
Employment Status of Medicaid-only Population  
Expansion and Non-expansion States

Hours Per Week	Percent of Adult Population by Hours Worked		
	Expansion State	Non-Expansion State	Composite
1-5 Hours	1%	1%	1%
5-9 Hours	1%	1%	1%
10-19 Hours	5%	3%	4%
20-29 Hours	11%	8%	10%
30-34 Hours	7%	6%	7%
35-39 Hours	5%	4%	5%
40+ Hours	27%	24%	26%
Not Employed	43%	52%	46%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Notes:

- Values developed using the 2015 American Community Survey (ACS).



- Values are rounded to the nearest percentage and may not sum 100.
- Population is limited to those adults eligible for Medicaid but not Medicare.
- Indiana introduced Medicaid Expansion under the Healthy Indiana Plan (HIP) 2.0 on Feb. 1, 2015.
- Alaska, Montana and Louisiana are included in the Non-Expansion states, as they had not expanded by July 1, 2015.<sup>7</sup>

States with high unemployment rates are likely to have a larger portion of the Medicaid population impacted by the implementation of a Medicaid work requirement relative to states with lower unemployment rates, as working individuals are generally more likely to already meet the requirements. As illustrated in Table 1, somewhat less than half of the adult, non-dual Medicaid population is estimated to be unemployed. Employment rates for Medicaid-covered adults are nearly 10 percentage points higher in expansion states compared to non-expansion states (57 percent vs. 48 percent). On a national level, nearly 90 percent of the employed Medicaid population reports working over 20 hours per week on average.

### Population Exemptions

In addition to identifying the broad Medicaid eligibility categories that will be subject to the work requirement, state policy makers should thoughtfully consider whether specific

exemptions should be allowed within each of the participating Medicaid eligibility categories.

- **Pregnant Women and Caregivers.** Most of the state proposals submitted to CMS to date have included exemptions for pregnant women and/or caregivers. Several states have sought alignment with other programs by allowing exemptions only for individuals caring for children under six years of age. By contrast, a legislative proposal out of Florida limited the caregiving exemption to single parents of an infant less than three months of age, while Kentucky’s Section 1115 proposal seeks to allow one exemption per household that includes a dependent child under 18 years of age. Also, recognizing that older adults younger than age 65 may be primary caregivers for aging parents, some states have also proposed caregiving exemptions for beneficiaries caring for individuals other than dependent children.
  - o Exemption Examples:
    - i. Pregnant women.
    - ii. Adults who are the primary caregiver of a dependent child (with limits depending on age of child).
    - iii. Adults who provide care for a disabled or aging family member.
- **Exemptions Based on Medical Considerations.** While most individuals in Modified Adjusted Gross Income (MAGI) eligibility groups do not have a formal disability determination<sup>8</sup>, there is a subset of the population that may be unable to meet work requirements due to medical conditions or difficulties with activities of daily living. In order to more narrowly tailor work requirement policies to healthy and able-bodied Medicaid enrollees, state policy makers have sought to create medical exemptions in a variety of ways. Where possible, most states have sought to align the medical exemption with those of existing programs to avoid having to allocate new resources to administer a new unique medical exemption. For example, several states are seeking to exempt individuals already determined eligible for and receiving long-term disability benefits, while other states are seeking to use existing processes to identify “medically frail” individuals exempt from the alternative benefit plan.<sup>9</sup> By contrast, states may create a process to certify individuals with medical conditions that prevent them from participating in the employment program as physically or mentally unable to work.
  - o Exemption Examples:
    - i. Exempt individuals receiving long-term disability benefits.
    - ii. Align with state’s “medically frail” determination.
    - iii. Leverage medical review team disability review process.



- iv. Allow process for temporary illness or incapacity as certified by a licensed medical professional.

- **Exemptions Based on Administrative Considerations.**

Given the historic growth of Medicaid following implementation of the ACA, the scalability of new Medicaid employment and training programs is a significant consideration for policy makers as they design program exemptions. One strategy to reduce the administrative burdens of tracking member compliance is to create broad categories of exemptions. For example, states could exempt individuals who are already working more than 30 hours per week or those who are full-time students. Although these activities may likely also be considered qualifying activities, by creating an exemption the state may reduce the administrative burden by eliminating regular reporting and tracking requirements for a substantial portion of the otherwise-included population.

- o Exemption Examples:
  - i. Full-time or part-time students.
  - ii. Unemployment insurance recipients.
  - iii. Individuals meeting SNAP and/or TANF work requirements.
  - iv. Age limitations (e.g., individuals under age 21 or individuals over age 60).
  - v. Individuals on Medicaid for less than a certain amount of time.

- **Vulnerable Populations.** There are several subsets of vulnerable populations, in addition to those with chronic health conditions that may fall within a broader Medicaid eligibility group otherwise subject to new work requirements. State policy makers may also consider giving special consideration to any of the following vulnerable populations.

- o Exemption Examples:
  - i. Homeless individuals.
  - ii. Refugees.
  - iii. Former foster care youth.
  - iv. Temporary exemptions for people transitioning from criminal justice.
  - v. Individuals participating in substance use treatment and rehabilitation.
  - vi. Other extreme hardship situations.

The exemption criteria utilized to identify individuals not subject to a work requirement may materially influence projections of savings realized by imposing a work requirement. Table 2 contains a summary of the population we estimated to be exempt from a work requirement as the result of common exemption criteria, including age limitations, pregnant women, primary caregivers, the medically frail and students. (In developing these estimates,

we utilized data from states that expanded Medicaid as of June 30, 2015, and the population eligible for Medicaid but not Medicare.)

Table 2  
Percent of Medicaid-only Population  
Exempted Using Various Exemption Criteria

Exemption Status	Percent
Age Limitations	45%
Pregnant Women	5%
Primary Caregivers	15%
Medically Frail	8%
Students	2%
<b>Total Exempt Population</b>	<b>75%</b>

Notes:

- Values have been rounded.
- Values developed using the 2015 American Community Survey (ACS) and 2015 Current Population Survey (CPS), based on data from states that expanded Medicaid by July 1, 2015.
- Population is limited to those eligible for Medicaid, but not Medicare.
- The child Medicaid population is included under the “Age Limitations” exemption.



On average, approximately 75 percent of the assessed Medicaid population would be exempt from a Medicaid work requirement based on common exemption criteria. The majority of the non-exempt population are Medicaid expansion adults, as the non-expansion population often meets these exemption criteria. It should be noted that actual values are certain to vary by state depending on Medicaid eligibility requirements.

**Participation Requirements & Qualifying Activities**

The participation requirements include the number of work, or work equivalent, hours required and the types of activities that meet the requirement. For ease of administration and member communication, states could simply extend the existing employment and training program requirements from SNAP, TANF, or unemployment insurance to the Medicaid population. However, since Section 1115 gives states the flexibility to design unique programs, policies can be designed to improve upon these existing programs, rather than just extending their scope. For example, Indiana and Kentucky<sup>10,11</sup> have proposed a graduated hour requirement structure to assist members transitioning into full compliance with an eventual 20 hour per week work requirement.

Further, although these programs are often described as “work requirement,” they are typically much broader and seek to connect individuals to a variety of qualifying activities beyond employment. Some common qualifying activities include:

- Subsidized or unsubsidized employment,
- employment/vocational training,
- job search activities,

- general education participation,
- English as second language,
- community work experience,
- community service/public service,
- caregiving services,
- participation in refugee resettlement programs, and
- participation in substance use disorder treatment.

The structure of participation requirements and qualifying activities can greatly influence the population impacted by a Medicaid work requirement. Table 3 illustrates the estimated portion of the non-dual Medicaid population that is not exempt or actively employed. This information was developed based on common exemption criteria and the estimated portion of the population actively employed.

Table 3  
Percent of Medicaid-Only Population Not Exempt from Work Requirement for States Expanding Medicaid

Item	Percent
Non-Dual Medicaid Population	100%
Exempt Population	75%
Actively Employed	15%
<i>Not Exempt</i>	10%

Notes:

- Values have been rounded.
- Population is limited to those eligible for Medicaid, but not Medicare.
- Actual values are certain to vary by state based on Medicaid eligibility requirements.
- Assumes that Work Requirement is implemented along with Medicaid Expansion.
- Estimates developed through the use of public data sources and internal research.

Table 3 illustrates that within a Medicaid-only population in states that expanded Medicaid, an estimated 10 percent of Medicaid beneficiaries would need to **begin** engaging in a qualifying activity. We estimate that approximately 50 percent to 75 percent of these individuals are likely to comply by engaging in qualifying activities. It should be noted that the compliance rates are certain to vary by state depending on programmatic structure and policy decisions. Careful consideration should be made in evaluating proposed policies to assess the impact on a state’s Medicaid program.

**DATA SOURCES AND METHODOLOGY**

Results shown in Tables 1 through 3 are for illustrative purposes; however, these estimates are a reasonable approximation for work requirement policies currently being evaluated. Actual results are certain to vary from the values illustrated. Consideration should be given to state-specific information related to items such as Medicaid eligibility, policy decisions, and employment rates.

In developing this information, we used 2015 American Community Survey (ACS) and Current Population Survey (CPS) data compiled by the United States Census Bureau<sup>12</sup> along with internal data and actuarial judgement. We limited data to those who were enrolled in Medicaid but not Medicare and developed expansion/non-expansion categorization based on each state’s 2015 expansion status provided by the Kaiser Family Foundation.<sup>13</sup> We provided additional consideration for Indiana, Alaska, Montana, and Louisiana, as noted in this report.

States must analyze each policy element in terms of its operational and fiscal impacts on the state Medicaid program, including scalability, reporting requirements and IT support.

## SUMMARY

When developing a Medicaid work requirement and employment initiative, states must analyze each policy element in terms of its operational and fiscal impacts on the state Medicaid program, including scalability, reporting requirements and IT support. The fiscal impact associated with a Medicaid work requirement is highly dependent on the structure and policy decisions of the initiative. In many states, a large portion of the adult population is already actively employed. If some of the Medicaid population does not comply with the work requirement, the state will realize fiscal savings because the state will not pay for services that these people would otherwise use or will not pay capitation rates to managed care plans.

These savings may be partially or fully offset by the cost of operating employment support programs for those who choose to comply with the requirement. Effective programs should be comprehensive and may be considered a long-term investment for the state. When evaluating fiscal savings, states should also consider the impact to the population losing coverage. In addition, the implementation of a Medicaid work requirement has the potential to increase the amount of uncompensated care in a state.

The actual fiscal savings will vary by state depending on the cost of services provided to the population served and the portion of the population that is unenrolled. The analysis we completed suggests that the cost of services provided to the population affected by a Medicaid work requirement is likely to be below that of the average adult Medicaid recipient. By removing lower cost individuals from the Medicaid population, the introduction of a work requirement has the potential to increase per capita spending, while at the same time decreasing aggregate expenditures. States and their actuaries should carefully evaluate the impact of proposed initiatives when evaluating these policy changes and their impact on Section 1115 submissions. ■



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## ENDNOTES

- 1 <https://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201702.pdf>
- 2 <https://www.urban.org/sites/default/files/publication/86761/2001041-who-gained-health-insurance-coverage-under-the-aca-and-where-do-they-live.pdf>
- 3 <https://www.hhs.gov/sites/default/files/sec-price-admin-verma-ltr.pdf>
- 4 [http://www.maine.gov/dhhs/oms/documents/Draft\\_MaineCare\\_1115\\_application.pdf](http://www.maine.gov/dhhs/oms/documents/Draft_MaineCare_1115_application.pdf)
- 5 <https://www.dhs.wisconsin.gov/badgercareplus/clawwaiver-finalapp.pdf>
- 6 [https://www.in.gov/fssa/hip/files/HIP\\_Amendment\\_-\\_FINAL\\_Publication\\_Version.pdf](https://www.in.gov/fssa/hip/files/HIP_Amendment_-_FINAL_Publication_Version.pdf)
- 7 [http://www.kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act/?currentTimeframe=0&sortmodel=%7B%22collid%22:%22Location%22,%22sort%22:%22asc%22%7D#note-28\\$435.603\(j\)\(3\)](http://www.kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act/?currentTimeframe=0&sortmodel=%7B%22collid%22:%22Location%22,%22sort%22:%22asc%22%7D#note-28$435.603(j)(3))
- 9 For additional information related to alternative benefit plans (ABPs), please see <https://www.medicaid.gov/medicaid/benefits/abp/index.html>
- 10 Kentucky later requested eliminating the graduated requirement, citing administrative and technological challenges.
- 11 <http://chfs.ky.gov/NR/rdonlyres/8803E89E-7197-46AE-AA32-037E9964711D/0/ProposedOperationalModificationstoWaiverApplication.pdf>
- 12 Further information about the sample size, survey conduction methods, and other items related to the dataset can be found at <https://www.census.gov/programs-surveys/acs/methodology/sample-size-and-data-quality/sample-size-definitions.html>.
- 13 For additional information, please see <http://www.kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act>

# Social Security Changes for 2018

By Bruce D. Schobel

Every October, the U.S. Social Security Administration announces certain changes in program amounts that occur automatically—that is, without any new legislation being necessary. The most widely publicized of these changes is the annual cost-of-living adjustment (COLA) affecting monthly Social Security benefits. Other automatic changes are important to people of working age as well as to beneficiaries. On Oct. 13, 2017, the government announced the Social Security COLA effective for December 2017 and the other increases effective for 2018. On Nov. 27, SSA modified its original announcement to reflect new data.

## BENEFIT INCREASE

Since 1984, Social Security's COLAs have been based on the 3rd-quarter-to-3rd-quarter increase, if any, in the average Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). The CPI-W, which is computed by the U.S. Labor Department's Bureau of Labor Statistics, rose 2.0 percent (rounded to the nearest 0.1 percent) year-to-year from the 3rd quarter of 2016 through the 3rd quarter of 2017. Accordingly, all Social Security benefits, in current-payment status or not, rose by the same percentage, effective December 2017. The December 2017 COLA was the largest since December 2011 (which was 3.6 percent). Note that, as usual, December benefits were actually paid in the following January; all monthly Social Security benefits are paid in arrears, after the month is over.

## MAXIMUM TAXABLE AMOUNT AND TAX RATES

A long list of updated Social Security program parameters, some of which are rather obscure, is ordinarily announced simultaneously with the COLA each year. Unlike the COLA, changes in these parameters are based on changes in the national average wage, which the Social Security Administration computes from W-2 data. Interestingly, workers who are self-employed, but not also employed by someone else, are excluded entirely from the average-wage computation. Workers who are both self-employed and employed have only their earnings from employment included, leading to some minor distortion in the resulting percentage change.



One very important change that affects high-income workers (employees and the self-employed) is the increase in the maximum amount of earnings subject to Social Security payroll taxes (FICA and SECA) during the year and creditable for benefit-computation purposes. The maximum taxable amount increased from \$127,200 for 2017 to \$128,400 for 2018, based on the increase in the national average wage to \$48,642.15 for 2016. Note that the 2016 value used in the calculation is the most recent national average wage figure available; at the time of the announcement, 2017 wasn't over yet.

The Social Security tax rates are not automatically adjusted, but are set by law. The FICA tax rate, payable by employees and employers, has been 6.2 percent for each since 1990. The self-employed pay both halves of this tax and get to deduct, for income-tax purposes, the half representing the employer share. Employees cannot deduct Social Security taxes from their taxable incomes, but employers can.

## RETIREMENT EARNINGS TEST

Another wage-indexed Social Security program parameter is the exempt amount under the retirement earnings test for beneficiaries who have not yet reached their normal retirement age, or NRA. (Social Security's NRA was 65 for workers born before 1938 and is rising gradually under present law to 67 for workers born after 1959.) The annual exempt amount for beneficiaries who will not reach their NRA during the

current calendar year rose from \$16,920 for 2017 to \$17,040 for 2018. For beneficiaries who reached their NRA in 2017, the exempt amount was \$44,880 for earnings in the months before reaching NRA. That exempt amount rose to \$45,360 for 2018. Since January 2000, workers who have reached their Social Security NRA can earn unlimited amounts without causing any reduction in their Social Security benefits. In fact, the additional earnings can cause monthly benefits to rise due to recomputations.

### COVERAGE CREDITS

Interestingly, certain wage-indexed program amounts are permitted by law to increase (or even decrease) with or without a COLA occurring. The amount of earnings needed to receive one coverage credit was \$1,300 in 2017 and rose to \$1,320 in 2018. Workers who earn at least \$5,280 in Social Security-covered employment (or self-employment) during 2018 will receive the maximum four coverage credits for the year. Workers need 40 coverage credits to be eligible for retired-worker benefits at age 62 or older. (These coverage credits used to be known as “quarters of coverage”; since 1978, they have been granted on the basis of annual earnings, making the old name inappropriate.)

### BENEFIT FORMULAS

The so-called “bend-points” of the formulas used to compute primary insurance amounts (PIAs) and maximum family benefits (MFBs) are also wage-indexed and can move up or down with or without a COLA occurring. The two PIA bend-points for workers first becoming eligible for benefits in 2018 (that is, born in 1956 in the case of retired-worker benefits) are \$895 and \$5,397. The three MFB bend-points for 2018 eligibilities are \$1,144, \$1,651 and \$2,154.

The complete list of wage-indexed program parameters for 2018 and corresponding values for previous years are available at [www.ssa.gov/oact](http://www.ssa.gov/oact). ■



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# Appropriateness of Risk-Taking by Public Pension Plans, Part II

By Don Boyd and Yimeng Yin

*This article first appeared in the February 2017 issue of the Nelson A. Rockefeller Institute of Government publication Pension Stimulation Project. The Table of Contents and the Executive Summary of this article have not been included in this reprint. It is reprinted here with permission.*

**T**his is the second part of a two-part series. The first part of this series appeared in the August 2017 issue of *In The Public Interest*.

## Insights about risk taking from academic research

### *Preliminaries: Investing assets with an eye on the liabilities they must fund*

Several academic researchers have examined questions of how pension funds should invest, and questions about risk-taking by governments more generally.<sup>1</sup> Before we examine lessons from these papers, we discuss briefly an important topic that arises in several papers.

The idea is this: pension fund liabilities depend upon investment market conditions in several ways. First, liabilities vary with interest rates: the higher that market interest rates are, the higher the discount rate used to value liabilities should be, with higher rates leading to lower estimates of liability and vice versa. Second, pension liabilities generally vary with the growth rates of worker wages: when state and local government workers' wages rise more rapidly, pension benefits based upon final pay will be greater, and vice versa. Third, pension liabilities often vary with overall price inflation: not only can higher inflation work its way into higher growth rates of wages, but many public-sector pensions are indexed for inflation so that higher inflation will lead to higher liabilities, and vice versa.

As pension fund liabilities move up and down with financial market conditions, if assets do not move in the same way then economic measures of pension funding—assets as a percentage of liabilities—will rise and fall. And if contributions are tied to



these measures they, too, will rise and fall.<sup>2</sup> This creates several related risks:

- Future taxpayers may have to pay for past pension promises—a form of intergenerational inequity.
- Pension contributions may rise substantially, crowding out current services or requiring large tax increases. Alternatively, politicians may balk at requested contribution increases, and instead will try to cut pension benefits, putting workers and retirees at risk.

Public pension funds generally appear to focus on investment returns rather than on investing assets with an eye on liabilities. By contrast, other entities with well-defined liabilities that they must fund, including banks, insurance companies, and more recently private pension funds, commonly invest in a way designed to ensure that liabilities will be paid. This approach, often referred to as liability driven investing or asset-liability management, focuses not on the risk-return investing tradeoff in isolation, but on how it relates to the liabilities that must be paid.<sup>3</sup> By contrast, pension funds generally try to minimize risk for a given level of investment return.

Liability-driven investing can take several forms. In its early days private pension plans often tried to match the annual or monthly cash flows of their benefit payments to cash flows from a set of bond investments, but this is can be difficult in practice and has other shortcomings, and is not as commonly used.<sup>4</sup> A more-flexible approach is to invest in assets that have the same present value and same interest-rate sensitivity as the pension liabilities, even if cash flows are not identical, so that assets and liabilities rise and fall similarly with interest rate

changes, keeping the pension plan funded as markets change. This approach generally includes bonds as investments as well as other assets. A portfolio that has the same interest-rate sensitivity as the liability it is matched to is said to be an immunizing portfolio because it immunizes (protects) the finances of the sponsor from interest rate changes. This can be extended in concept to the government employee wage growth and inflation risks discussed above, although it can be more difficult to find assets that match wage-growth risks.<sup>5</sup>

One important feature of liability-driven investing for a plan that is fully funded is that political risks are reduced significantly. The plan does not oscillate between overfunding and underfunding as will happen with plans in which assets do not match liabilities. Thus, there is less opportunity to enhance benefits when the plan is overfunded and to cut benefits (where law allows) when the plan is underfunded. The appendix uses results from our stochastic pension fund simulation model to illustrate how large swings in plan funding and contributions can be, even when a plan hits its assumed rate of return over the long run.

## TWO IMPORTANT PAPERS

Important papers by economists Deborah Lucas and Stephen Zeldes analyzed a simple theoretical model that incorporated several important concepts:<sup>6,7</sup>

- The taxes needed to pay pension contributions will distort economic behavior, causing what economists call “welfare loss” (a decrease in economic well-being for society).
- Riskier assets tend to have higher expected returns, so expected pension contributions and taxes will be lower if pension funds hold risky assets.
- A potentially competing force is that the welfare loss from taxes can rise disproportionately as tax rates rise, under certain common assumptions. That is, a doubling of taxes causes a more-than-doubling of the cost to society from taxes. This means that stable taxes will be less costly to society than volatile taxes that raise the same amount of revenue over the long run.

Lucas and Zeldes then asked what kind of pension fund portfolio would minimize the distortion from taxation, taking these competing forces into account. Based on their theoretical model and its assumptions, they concluded that the share of assets held in stocks (i.e., risky assets) should depend upon:

- **The expected gains from risk-taking:** When the equity premium is higher, the share of assets held in stocks should be higher, all else equal. (The equity premium is a measure of expected gains from investing in stocks as opposed to risk-free assets.)

One important feature of liability-driven investing for a plan that is fully funded is that political risks are reduced significantly.

- **The volatility of stock returns:** In periods when stock market returns are more volatile, the corresponding swings in contributions and taxes will be greater, leading to greater distorting effects. Thus, in periods when stock market volatility is higher, less stock is appropriate.
- **The relationship between pension liabilities and stock returns:** If pension liabilities are higher when stock returns are higher, then all else equal the share of assets held in stocks should be higher. Pension liabilities and stock returns could be correlated in this way if liabilities depend partly on wage growth, as they generally do (higher wages lead to higher pensions), and IF wages tend to be higher when stock returns are higher. If these conditions hold, then investing in stocks can help to hedge pension liabilities. However, there is empirical debate over the extent to which stock returns and wages are, or are not, correlated in this way.<sup>8</sup>
- **The relationship between stock returns and government fiscal conditions:** If stock market returns are low when government fiscal conditions are poor, as could happen if recessions drive down stock prices as well as state tax revenue, then the share of assets held in stocks should be lower than otherwise. (This is particularly true for governments that rely heavily on personal income taxes.<sup>9</sup>) In this case a given tax rate will raise less revenue when revenue is needed most, and even higher rates will be needed to finance pension contribution increases than otherwise would be required. This increases the cost to society of raising taxes to pay contributions.

Lucas and Zeldes conclude that under the assumptions of their model, pension plans generally should hold at least some stock, but the authors do not attempt to quantify how much. They also discuss factors outside of their model. One important factor is the possibility that taxpayers will face a one-sided risk – the risk that they will bear all investment return shortfalls, but that politicians may share pension fund surpluses with workers and retirees in the form of higher pension benefits.<sup>10</sup> The authors conclude that the combination of these other factors “seem to point toward a policy of matching assets and liabilities, even if it means forgoing the equity premium.” In other words, these

other factors suggest that assets should be similar in duration and risk to pension liabilities (discussed further below), partly countering the reasons to hold stock in a pension portfolio.

In another important paper, economists George Pennacchi and Mahdi Rastad built a theoretical model of pension fund portfolio management and examined it under two scenarios, one in which the pension fund manager has the interests of taxpayers in mind, and one in which the pension fund managers have their own interests at heart.<sup>11</sup> (In the taxpayer-oriented analysis, the pension fund manager tries to “maximize the utility of wealth of a representative taxpayer.” In the fund-manager-oriented analysis, the model maximizes the managers’ “own utility of compensation,” where their compensation is based on their performance relative to their peers.)

The taxpayer-oriented version of the model suggested that the pension fund generally should choose a portfolio that matched the characteristics of the pension liabilities, assuming the taxpayer doesn’t have the information and flexibility needed to adjust his or her personal portfolio to offset unwanted risk taken by the pension fund.<sup>12</sup> Under such a liability-matching strategy, pension fund liabilities and assets would move together in different market conditions, leaving taxpayers free to choose whatever level of risk they want to bear in their personal portfolios without worrying about the pension fund.

In the pension-fund-manager-oriented version of the model, where the manager’s compensation depends on how well the pension fund performs against peers, the model suggests that the pension fund is likely to take on more risk when performance lags against peers.<sup>13</sup>

Pennacchi and Rastad then tested the predictions of their model empirically against portfolio choices made by 125 large public plans over the 2001–2009 period. They found generally that public pension funds’ assets were invested in a manner more consistent with the goal of matching the performance of peers than with the goal of matching assets to liability characteristics. In other words, their investments were more consistent with the fund-manager-oriented version of the model than with the taxpayer-oriented version.

Penacchi and Rastad concluded that a portfolio that matches its liability characteristics can fully fund pension obligations as they accrue, minimizing uncertainty to taxpayers. They believe this is the best objective.<sup>14</sup> They conclude that a typical plan in which benefits have cost of living adjustments (COLAs), as is common in public plans, would invest a liability-matching portfolio heavily in inflation-protected fixed-income securities and other fixed-income securities, assuming it is not allowed to bet against equities or other asset classes (i.e., it cannot have short positions).<sup>15</sup>

Public plans do not generally invest in liability-matching portfolios. They tend to allocate assets based on performance of peer funds, consistent with the idea that investment managers have objectives than minimizing uncertainty to taxpayers, such as maintaining their reputation among peers.

## SUMMARY OF KEY CONCLUSIONS FROM RESEARCH

Academic research suggests that there are strong arguments in favor of choosing investment assets that roughly match the bond-like characteristics of pension liabilities, sometimes referred to as asset-liability matching or, more generally, liability driven investing. Among other things, this approach minimizes funding risk and avoids the intergenerational inequity that results from shifting current costs to future taxpayers. In addition, it can avoid the asymmetric political choices that can arise when plans episodically become overfunded—as they must when there are volatile investments—choices that can result in gains going to employees and retirees in the form of higher benefits, and losses going to taxpayers and other stakeholders in government in the form of higher taxes or lower services.

Asset-liability matching generally suggests that pension funds should invest very heavily in inflation-protected fixed-income securities and other fixed income securities, with relatively little equity assets. Thus, pension funds would take far less risk than they are taking now, and would forego most of the equity risk premium they currently assume they will achieve (but that they cannot count on achieving). This would require them to request higher contributions from governments now, which may help to explain why they have not done this.

## CONCLUSION

Public pension funds invest in stocks, bonds and other assets with the goal of accumulating sufficient funds, in combination with employer and employee contributions, to pay benefits when due. Investments can entail risk, and contributions may have to be adjusted to ensure that assets are sufficient to pay benefits. State and local governments generally backstop public pension funds, paying higher contributions when investment returns are below expectations, or lower contributions when investment returns are above expectations. Thus, taxpayers and those who benefit from government services and investments bear the consequences of this investment risk. The Rockefeller Institute of Government’s Pension Simulation Project is examining the potential consequences of investment-return risk for public pension plans, governments, taxpayers, and other stakeholders in government.

Most public pension funds are in a precarious situation. It is much more difficult to achieve assumed returns in the current low-interest-rate environment than it was in the 1990s and previous decades. If the funds’ primary goal had been to ensure that benefits are securely funded, they would have lowered earnings



assumptions to reflect the decline in interest rates, much as private pension funds in the United States, and public and private plans in Canada and the Netherlands, did. This would have required them to request much higher contributions from state and local governments and would have allowed them to remain invested in relatively lower risk assets. But higher contributions might have generated vociferous opposition from politicians leading these governments, who would have had to raise taxes or cut services. And it could have led to increased public opposition to pension benefits provided to state and local government workers.

Instead of lowering earnings assumptions and making higher contributions, U.S. public pension funds increased their allocation to risky assets. They did this in part because the regulatory environment allows it and encourages it. Now, as one group of researchers put it, “gradually, U.S. public funds have become the biggest risk-takers among pension funds internationally.” The potential consequence of investment shortfalls, relative to state and local government tax revenue, is now more than three times as large as it was in 1995, and about 10 times as large as in 1985.

Even though contributions paid by state and local governments have gone up considerably, they are much lower than they would be if plans had lowered earnings assumptions and maintained their previous level of risk. Contributions are lower than they would be if plans had lowered earnings assumptions substantially, but are far more uncertain, and could rise much further still, or fall to lower levels, depending on the performance of pension funds’ portfolios, which are about two-thirds invested in equity-like assets.

Are the pension fund investment risks that state and local governments and their stakeholders face too great or too small? There is no golden rule but research offers insights:

- If the goal is to minimize the distorting effects of taxes on economic behavior, public pension funds should hold at least some stock, because the equity premium, if achieved, can help keep taxes low. All else equal, higher equity premiums suggest more stock is appropriate.
- In periods when stock market returns are more volatile, corresponding swings in contributions and taxes will be greater, leading to greater economic distortions. Thus, in periods when stock market volatility is higher, less stock is appropriate.
- There are strong arguments for investing pension funds so that the assets roughly match the bond-like characteristics of pension liabilities. This is sometimes referred to as asset-liability matching or, more generally, liability-driven investing. In this approach, assets rise when liabilities rise, and fall when liabilities fall, which minimizes funding risk and avoids



shifting current costs to future taxpayers. This also avoids the asymmetry that arises when pension plans with volatile assets swing from overfunding to underfunding and back: plans and politicians can face incentives to increase benefits or reduce contributions when a plan is overfunded, but cannot reduce benefits in periods of underfunding.

These insights about risk-taking suggest that public pension funds should hold more of their assets in fixed income and less in equities. But this would require lowering earnings assumptions, and increasing contributions from governments, in turn leading to higher taxes, cuts in spending, and possibly pressure to cut benefits where law allows. It would also lead to more secure funding of pensions.

Many public pension funds have begun to lower their earnings assumptions and reduce investment risk, albeit nowhere near as much as the asset-liability matching approach would suggest, and the risk of large investment shortfalls remains. Further reductions in risk and increases in government contributions are likely.

This is a difficult and unsustainable position to be in. It would have been much better to avoid it in the first place. There are two things that policymakers can do that would be important steps toward confronting the situation. First, policymakers should explore ways to change and counter the incentives and institutions that encourage U.S. public pension funds to take risk. Second, public pension funds should ensure that they analyze and communicate the risk they are taking, in ways that can be understood not just by their boards, but by the governments that contribute to their funds, and by the public that ultimately bears the risks they take.

APPENDIX

*The inevitable swings in funding for plans with risky assets*

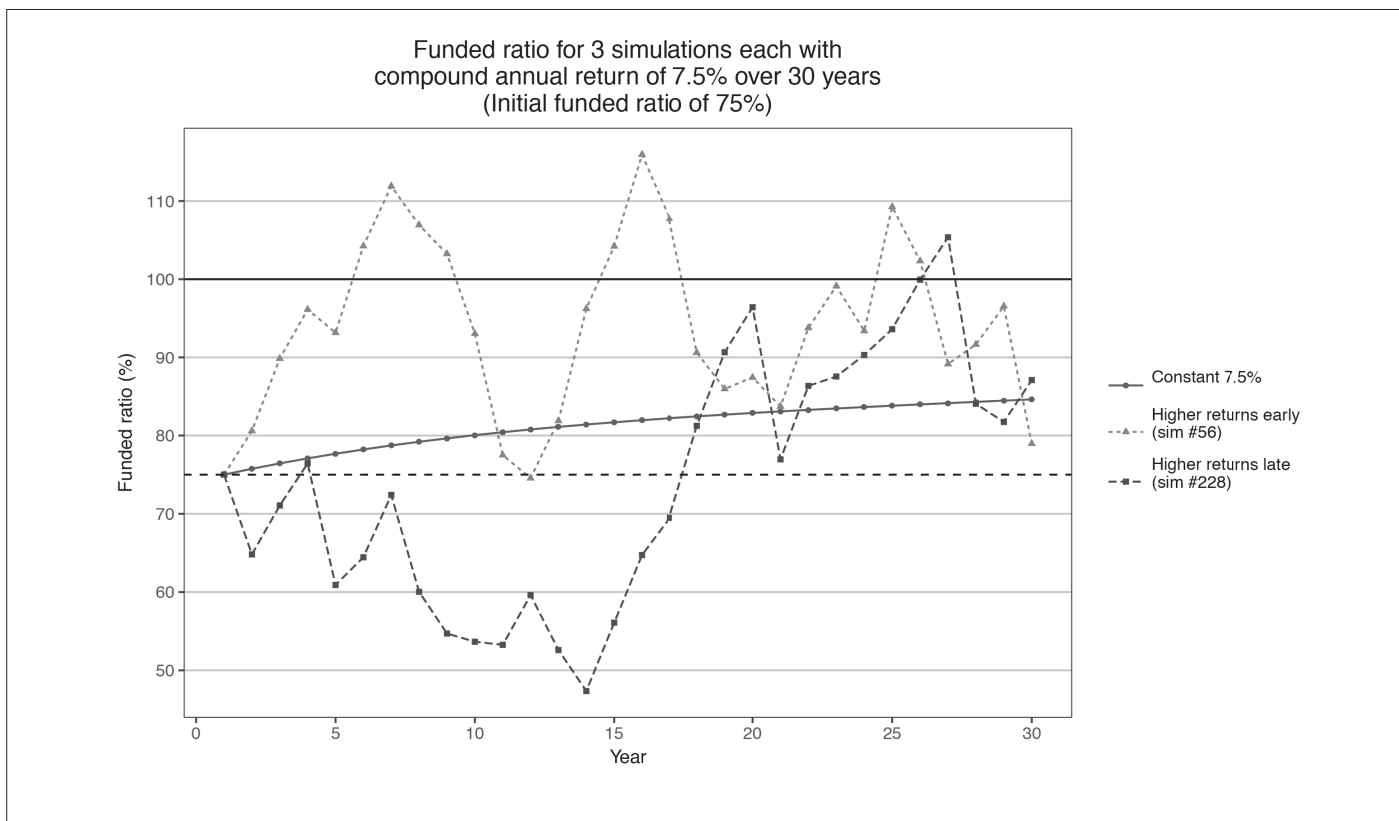
Plan beneficiaries are at risk when investment risk becomes great. Even if a plan hits its investment return assumptions over the long run, when volatility is great, the plan and its sponsor will be on a roller coaster ride. The plan funded ratio can vary greatly over the span of a few years. Employer contributions may be more stable in the short run because of contribution-smoothing policies that plans and governments use, but these methods cannot prevent large swings in contributions over the longer term.

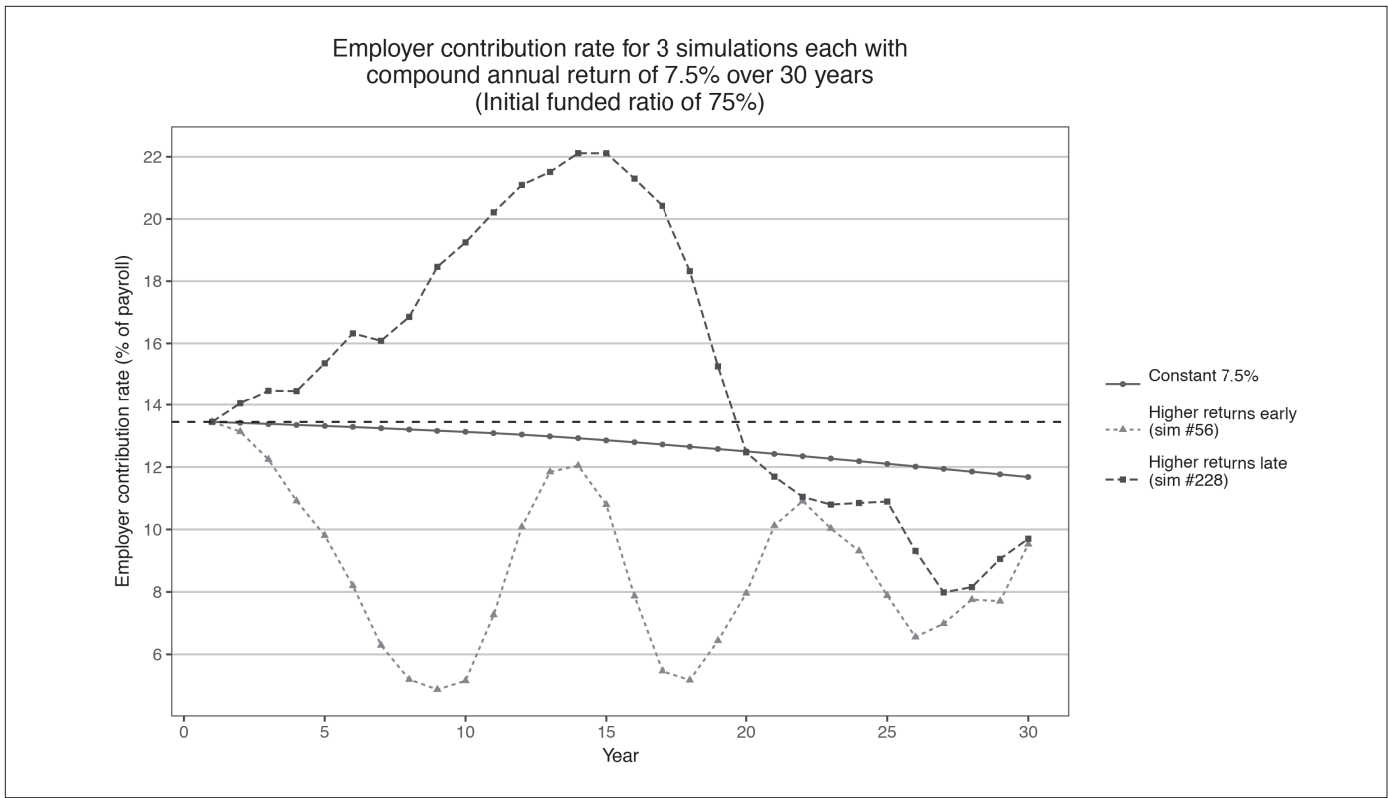
Figure 6 illustrates this roller coaster ride using our stochastic model of pension funds. We model a plan with average demographic characteristics, a 75 percent initial funded ratio, a 7.5 percent earnings assumption with a 12 percent standard deviation, and a fairly stretched out funding policy (30-year level percent open) over a 30-year simulation period.<sup>16</sup> The top panel shows the plan funded ratio, and the bottom panel shows the employer contribution as a percentage of payroll.

Each panel shows three individual simulations from the model, where a simulation is a single lifetime of the pension fund. The red line shows what happens if the pension fund earns exactly 7.5 percent each and every year. The green line is one specific simulation that achieves a 7.5 percent compound annual return at the end of 30 years, but in which returns generally are better in the early years and worse in the later years. The blue line shows the opposite: returns tend to be lower in the early years and better in the later years, but the compound return at 30 years is 7.5 percent. The green and blue simulations were chosen out of a thousand simulations precisely because they achieve plan assumptions at the end of 30 years and because they are representative of the volatility we can expect. Many other simulations out of the thousand we ran present greater risks in the sense that they have average compound returns at 30 years that are either higher or lower than 7.5 percent. (Furthermore, a 7.5 percent compound return may be unrealistic to expect in the current low-interest-rate environment, making these simulations optimistic.)

Figure 6.

Even if a plan hits its assumptions on average, its funded ratio and employer contributions are likely to be on a roller coaster





This wild ride might be fine in a technical system without people: investment returns fall short, the funded ratio falls, contributions rise, and the funded ratio gets back on a path to full funding. But pensions are funded by people. In the example above, will elected officials be willing to pay contributions in year 15 that are nearly double what they were in year 1, as is required in the blue line (bottom panel)? If the funded ratio rises above 110 percent, as it does in the green line (top panel), will politicians go on a contribution holiday, using savings to cut taxes or raise education spending? These are real-world risks. In addition, the blue and green simulations were chosen because they hit the actuarial assumption on average. Most simulations will not, so contributions easily may rise higher and fall further than in the illustration, as may the funded ratio. ■



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## ENDNOTES

- 1 For good summaries of some of the most important research, see Munnell, *State and Local Pensions*, pp. 65-67 and Brown, Clark, and Rauh, "The Economics of State and Local Pensions," pp. 165-166.
- 2 Public pension funds' published estimates of liability generally do not change as rapidly as market conditions change – their economic assumptions such as discount rates, wage growth rates, and general price inflation tend to change very slowly.
- 3 For a good discussion of the historical development of this approach, see Ronald J. Ryan, "The Evolution of Asset/Liability Management," *Research Foundation Literature Reviews*, Research Foundation of CFA Institute, 8, no. 2 (2013): 1-25, <http://www.cfa-pubs.org/doi/full/10.2470/rflr.v8.n2.1>.
- 4 Ibid.
- 5 As noted earlier, Lucas and Zeldes hypothesized that stocks could play this role, but it likely would not be a large part of the investment portfolio. Lucas and Zeldes, "How Should Public Pension Plans Invest?" (And others have concluded that stocks may not be sufficiently correlated with wage growth to play this role.)
- 6 Ibid.
- 7 Deborah Lucas and Stephen P. Zeldes, "Valuing and Hedging Defined Benefit Pension obligations—The Role of Stocks Revisited," Northwestern University and Columbia University, Working Paper, September, 2006, <http://repec.org/mmf2006/up.11388.1159529601.pdf>.
- 8 For example, Pennacchi and Rastad (pp.232-234) find that state and local government employee wage growth and equities are negatively correlated over most time periods that would be relevant to public pension funds, not positively correlated. Pennacchi and Rastad, "Portfolio Allocation for Public Pension Funds."
- 9 The Rockefeller Institute has written about this extensively. See the section, "Capital Gains, the Stock Market, and April Tax Returns" in Donald J. Boyd and Lucy Dadayan, "State Revenue Report #79: Revenue Declines Less Severe, But States' Fiscal Crisis Is Far From Over," *State Revenue Report* (Rockefeller Institute of Government, April 2010).
- 10 Discussed at length in Michael Peskin, "Asset/Liability Management in the Public Sector," in *Pensions in the Public Sector*, ed. Olivia S. Mitchell, Edwin C. Husted, and Wharton School (Philadelphia: University of Pennsylvania Press, 2001).
- 11 Pennacchi and Rastad, "Portfolio Allocation for Public Pension Funds."
- 12 There are exceptions to this general conclusion. For example, if taxpayers want to take risk but are unable to do so because they don't have low-cost access to risky assets, it could be in their interest for the pension fund to take risk on their behalf.
- 13 The incentive to take more risk in the portfolio means, in this context, to have a greater mismatch between pension fund assets and the characteristics of pension fund liabilities. The conclusion that the fund manager will take more risk when performance lags does not hold if the pension fund manager's personal wealth is less than his or her allocated share of total pension fund liabilities.
- 14 Pennacchi and Rastad, "Portfolio Allocation for Public Pension Funds."
- 15 Assuming that benefits are inflation-indexed and that the pension fund is restricted from taking short positions in a significant way is probably the most realistic scenario. The paper also shows optimal investment allocations under scenarios in which benefits are not indexed for inflation, which drive investments toward non-inflation-protected fixed-income securities, and scenarios in which short positions are allowed, which can lead the fund to bet against equities and other assets.
- 16 While many plans use funding policies that pay down shortfalls more quickly, our analysis of the Public Plans Database from the Center for Retirement Research shows that this is a fairly typical policy for plans with large unfunded liabilities.



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# Long Life Can Have a Big Effect on Public Finance

By Anna M. Rappaport

The Society of Actuaries has sponsored a research program “Living to 100 and Beyond” for the last 15 years. These programs have been a place for new ideas, exchange of information, discussion of controversies, learning how other disciplines view related issues and identifying points of agreement and disagreement. The cumulative program output since 2002 includes more than 150 scientific papers, a number of presentations and panel discussions and six symposia. The symposia every three years bring together a diverse group of experts with different perspectives on the need to understand changing life spans and strategies to adapt to longer life spans. This article offers some of my perspectives on the 2017 symposium and the effort overall.

## BIG IDEAS—BIOLOGY

A focus on biology has been a regular part of Living to 100. In 2017, there were two major presentations highlighting developments in biological and medical research. Videotapes of both presentations are included in the monograph. They are of interest for many areas of public policy. The overlapping content in those two presentations was that there is a biological aging process that is related to the development of many different diseases. If that aging process can be stopped or slowed down, it would have a major impact on many different diseases and potentially extend the period that people are able to be healthy, but without much impact on total life spans.

Nir Barzilai is Professor of Medicine and Genetics at the Albert Einstein College of Medicine at Yeshiva University and director of the Institute for Aging Research. His presentation was titled “How to Die Young at a Very Old Age.” He is conducting research on centenarians, and searching for a drug that can intervene in the aging process. He is actively involved in promoting a large research project “TAME: Targeting Aging with Metformin.” The hope is that the study will demonstrate that Metformin can target multiple morbidities of aging, and that it will then be approved for use on a widespread basis. The study also has goals to provide a different paradigm for studying next generation drugs that target multiple morbidities of aging, and to apply the studies of science as powerful new tools to achieve primary prevention of multiple diseases. If the associated



researchers achieve the hoped-for results, this work could help in extending healthy life expectancy and lead to major reductions in medical costs. It could also change the way medicine is practiced to focus less on specific diseases and much more on the total person and on cross disease prevention. (In addition to the monograph, you can learn more about his research at <https://www.einstein.yu.edu/centers/aging/longevity-genes-project/>)

Judith Campisi is an internationally recognized biochemist at the Buck Institute for Research on Aging. She has made contributions to understanding why age is the largest single risk factor for developing a variety of diseases including cancer. She explained cellular processes and senescent cells—older cells that have stopped dividing—and how they contribute to disease and the aging process. Senescence occurs when cells experience certain types of stress, especially stress that can damage the genome. The senescent cells help prevent cancer by blocking damaged cells from multiplying. But there is a trade off—the lingering senescent cells may also cause harm to the body. Her research group found evidence that senescent cells can disrupt normal tissue functions and, ironically, drive the progression of cancer over time. Senescent cells also promote inflammation, which is a common feature of all major age-related diseases. Her research is shedding light on anti-cancer genes, DNA repair mechanisms that promote longevity, molecular pathways that

protect cells against stress, and stem cells and their role in aging and age-related disease. Her research integrates the genetic, environmental and evolutionary forces that result in aging and age-related diseases, and identifies pathways that can be modified to mitigate basic aging processes. She is collaborating with many other research groups on similar issues. Her research and related work has the potential to make major changes in the way aging and disease are viewed. (For more information about her work, see <http://www.buckinstitute.org/campisiLab>)

Together, these two presentations left me with the idea that there are potentially major changes in the way we view aging and deal with the diseases of aging that can lead to very modest changes in life expectancy with a big reduction in the number of “sick” years at the end of life. That would be great news. Jay Olshansky, in the final panel at Living to 100 focused on the future and suggested that as one scenario. He also suggested additional scenarios, and this discussion is very important to public policy. The final panel is General Session VI and a transcript is included in the monograph.

## BIG IDEAS—A FOCUS ON PEOPLE: LIVING WELL IN GOOD COMMUNITIES

There were different discussions of the human aspect of aging, a new focus for Living to 100. Steve Vernon presented the Stanford Center on Longevity’s “Sightlines Project” which defines three major domains for living well to old ages: financial stability, health and social engagement. The formal recognition of social engagement is new for many people. This project includes indicators of how well we are doing in these domains and recommendations for improvement. Social engagement was a new area of emphasis for Living to 100. The Society of Actuaries is a sponsor and supporter of the “Sightlines Project.” At the same session, Cynthia Hutchins, director of Business Gerontology from Bank of America Merrill Lynch, provided insight about the need to plan for seven life priorities: health, home, family, leisure, giving, work and finance. Both of these discussions provide strong messages that planning for money and health is not enough. A transcript of this session (General Session II) is included in the monograph.

Phyllis Mitzen in “The Changing Face of Eldercare” presentation focused on big ideas: making communities friendly to an aging population, and on steps that support people staying in the community longer. A transcript of this presentation is shown in the monograph as Session 6B. The World Health Organization has established a program of age-friendly communities and a process to help communities become more age-friendly. The eight domains of an age-friendly community are community and health care, transportation, housing, outdoor space and buildings, social participation, respect and social inclusion, civic participation and employment, and communication and information. She said that there are 332 age-friendly cities today in

36 countries. The AARP is the U.S. Affiliate of this network. The AARP program focuses on safe walk-able streets, age-friendly housing and transportation options, access to needed services and opportunities for residents of all ages to participate in community life. Age-friendly communities do not replace the need for senior housing and nursing homes, but they give people new options and may make it feasible for them to stay in the community longer.

Phyllis Mitzen also focused on the “Village” movement, or the formation of neighborhood-based groups for seniors that support people aging in the community. Such organizations are heavily based on volunteerism and people helping each other. The first village was formed in Boston in the Beacon Hill neighborhood in 2002. Mitzen founded and chairs Skyline Village in Chicago. <http://www.skylinevillagechicago.org>. My view is that villages are very helpful and can supplement and take the place of extended family for seniors who need to be part of a support network where they live. To learn more about the village movement, see [http://www.vtvnetwork.org/content.aspx?page\\_id=0&club\\_id=691012](http://www.vtvnetwork.org/content.aspx?page_id=0&club_id=691012).

## MORTALITY IMPROVEMENT: A MAJOR CONCERN

Actuaries establish prices and calculate reserves for financial products and programs. Rates of mortality improvement are important in these financial calculations. Different mortality tables are used for different programs based on the populations covered.

Living to 100 was started around the year 2000 because of the difficulty in finding reliable data at very high ages and the added difficulty of projecting change. In 2017, the Social Security actuaries from the U.S., U.K. and Canada again compared mortality and projection methodology. All agreed that mortality improvements at the high ages are slowing compared to the last 25 years. Canadian mortality continues to be significantly lower than U.S. mortality. The U.S. has a shorter life expectancy than many countries. A video of this presentation (General Session IV) is included in the monograph. In addition to the discussion by the Social Security actuaries of what they do, Larry Pinzur presented a session on mortality improvement approaches. Recent retirement plans experience committee work blends

Age-friendly communities do not replace the need for senior housing and nursing homes, but they give people new options. ...

near term mortality improvement based on recent experience with longer-term mortality improvement based on expert opinion. Social Security considers cause of death analysis in setting improvements. A transcript of this session, Session 6A, is in the monograph.

For me, it was very interesting that there did not seem to be any major disagreements about future mortality improvement. This was in sharp contrast to some of the earlier conferences which indicated much more divergent opinions. Many of the papers deal with mortality improvement and modeling. I do not know whether the absence of sharp disagreement was a reflection of the attendee mix or whether it reflects greater consensus about assumptions.

## PUBLIC POLICY ISSUES

Population aging is changing the fabric of our societies, and affects many areas of policy. A transcript of this session (Session IC) is in the monograph. David Sinclair, director of the International Longevity Center in the U.K., provided insight into several big policy challenges in the U.K. They were addressing issues such as the cost of aging, saving more, providing an adequate workforce, getting older people to spend more, delivering health and care (which we would call long-term care or long-term services and supports), maximizing the opportunity of technology, and responding to the issues surrounding housing wealth. In my view, there is a major overlap with big underlying issues in the U.S.

Rob Brown, retired professor from the University of Waterloo, provided insight into issues getting recent attention in Canada. Social security benefits have recently been increased and after an attempt to raise retirement ages, the legislation was reversed. The majority of the public does not have employer sponsored benefits. There are challenges in funding health care, and in the provision of health and long-term care. Canada seems to be going in a different direction than many countries, and it is maintaining and improving social benefits.

An international issue that concerns me greatly is the ever-increasing length of retirement and the failure of policymakers to address it.

John Cutler, an attorney and senior fellow at the National Academy of Social Insurance, pointed to the huge uncertainty in the U.S. linked to the Trump election. The Federal government plays a huge role in health care and it is completely unclear how that role may change going forward. Proposals to modify that role are a high priority in the new administration, but there is no consensus about the replacement programs. Less visible, but also very important, is the need to bring Social Security into financial balance, and some pension issues. As of September 2017, there has been a lot of discussion, but no action on health care.

Even though aging affects many areas of life, there is no integrated focus on aging. Phyllis Mitzen, in “The Changing Face of Eldercare” session, shared points made in a letter from the SCAN Foundation to President-elect Donald Trump. They requested that he:

- Name and give authority to a national leader who will build solutions for older Americans across all domestic policy areas.
- Protect older Americans and their families from financial bankruptcy when long-term care needs strike.
- Modernize Medicare to pay for team-based, organized care to get more value for older Americans with complex care needs.
- Accelerate federal and state efforts to integrate Medicare and Medicaid.
- Build new ways to measure health care quality based on what older Americans want.

While this does not seem likely, it provides some ideas about changes that would be very positive if they were feasible.

My view is that there are many similarities between demographics and the big issues facing our countries as we deal with population aging, but our solutions vary. Sharing of information is very valuable. An international issue that concerns me greatly is the ever-increasing length of retirement and the failure of policymakers to address it.

## CONCLUSION

For me, it has been a great privilege to participate in Living to 100 as a member of the planning committee, as a paper writer, and as a presenter. If I think about the large and complex variety of issues that we are dealing with as society ages as a mosaic,



each of us has knowledge and perspectives that fill in some of the tiles. For each of us, they are different. At Living to 100, I am able to fill in more tiles and to have contact with people whose knowledge is in very different parts of the total space. That helps me deepen my understanding in the areas where I concentrate and change my perspective. I hope that many of you will watch the videos, read the papers, transcripts and the overview paper, and that you will participate in the next rounds of Living to 100. Thank you to the Society of Actuaries for this effort. ■



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#### ACCESSING INFORMATION ABOUT LIVING TO 100:

For each of the six symposia there is a monograph on the Living to 100 website at <https://livingto100.soa.org>. The 2017 monograph including the new papers can be found at <https://www.soa.org/Library/Monographs/Life/Living-To-100/2017/table-of-contents.aspx>. All of the papers from 2002 to 2014 and the findings are summarized in a report prepared by Ernst and Young. This report is split between technical issues and implications, and can be found at <https://www.soa.org/Research/Research-Projects/Life-Insurance/soa-living-100.aspx>. The report also highlights areas of agreement and differences and it includes abstracts for all of the published papers in an Appendix.

# MARK YOUR CALENDAR



## UPCOMING SOA EVENTS

### **Investment Symposium**

March 8, 2018 • New York, NY

### **ERM Symposium**

April 19–20, 2018 • Miami, FL

### **Life and Annuity Symposium**

May 7–8, 2018 • Baltimore, MD

### **Asia-Pacific Annual Symposium**

May 24–25, 2018 • Seoul, South Korea

### **China Annual Symposium**

May 28–29, 2018 • Beijing, China

### **Health Meeting**

June 25–27, 2018 • Austin, TX

### **Valuation Actuary Symposium**

Aug. 27–28, 2018 • Washington, DC

### **Annual Meeting & Exhibit**

Oct. 14–17, 2018 • Nashville, TN

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