

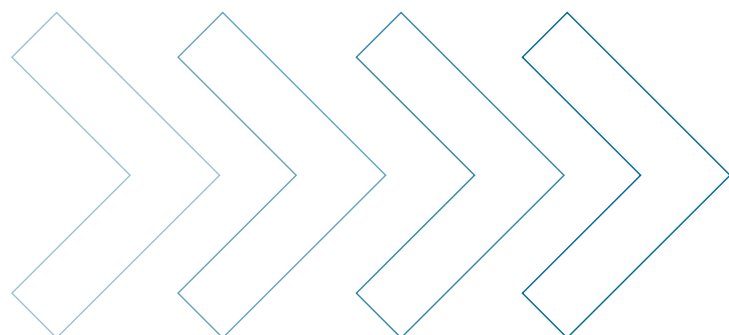


In The Public Interest

ISSUE 12 • JANUARY 2016

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Letter From the Editor

By Jeffery M. Rykhus

Happy New Year to everyone.

This issue's cover article is on the Cadillac plan excise tax. Written by Paul Houchens, it discusses the significant impacts that Paul sees in the near future as this tax begins to be implemented. Read about the issues involved and ask yourself this. Do you think that this will become a big issue in the upcoming election for 2016?

Chairperson Sven Sinclair contributes a thoughtful piece on the relationship between individual equity and funding of future contingent payments. He also summarizes recent section activity and ongoing projects within the section.

Public pensions are always a hot topic in the actuarial cyberspace. New council member Paul Angelo has contributed an article that was previously published by the American Enterprise Institute. Significantly, Paul's "Author's Note" discusses a wrinkle in one of the ASOPs that touches on the old argument about level cost and market pricing models for public pension plan liabilities.

Social Security changes for 2016 are the topic of an article by Bruce Schobel. His article addresses exactly what does or does not change from 2015, and the routine changes that occur by law, every year, are all addressed here. The recent budget leg-

islation that affected Social Security is not included in this discussion, but there were very significant changes made to Social Security, and that will be the subject of an upcoming webcast or newsletter article, I hope.

Finally, long-time council friend, Jeremy Gold, shares a piece with us about his own experience in the public pension arena. His article is based on a recent speech he made at the Massachusetts Institute of Technology (MIT).

I invite readers to comment on specific articles (or to make more general remarks regarding social insurance and public finance) in their letters to the editor. ■



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Individual Equity and Social Adequacy

By Sven Sinclair

An important part of actuaries' education and training is the instilling of respect for two important principles: individual equity and funding of future contingent payments. Individual equity means that each insured individual's premiums or contributions are based on the actuarial present value of that same individual's future benefits (in other words, on that individual's risk characteristics). Funding means that promised contingent payments are secured by assets held by the insurer or pension fund for that specific purpose.

These two principles have a clear purpose in private insurance and pensions, where participation is voluntary, and entities that promise benefits may weaken or cease to exist due to market forces. If premiums charged by a private insurer are not closely related to each policyholder's risks, and some policyholders are subsidizing other policyholders, another insurer can profitably offer a better deal to the overcharged policyholder, leaving the first insurer mainly with the undercharged policyholders, whose premiums do not adequately cover their expected benefits. If a company that promised pensions to its workers goes under without sufficient assets to pay those pensions, the workers will never receive part of their promised compensation and will likely experience financial hardship in old age.

In social insurance, however, individual equity and funding are often not necessary, and sometimes may not even be desirable. If

participation in an insurance program is mandatory and universal, adverse selection becomes irrelevant, and it is feasible to set contributions and benefits to achieve a different goal, social adequacy. Also, the sponsoring entity (the state) is not at the mercy of the market: it has taxing power and will not cease to exist. (If it does, we'll likely have worse problems than unpaid benefits.)

The contrast is not always so sharp. Some degree of individual equity in social insurance is usually necessary for the programs to maintain broad political support, and funding may be necessary for programs provided by subnational entities or by countries with less stable governments. Neither are the two principles sacrosanct in the private sector; for example, it is difficult to determine the individual incidence of employee benefit costs, and retiree medical benefits are often not funded.

Actuaries working for government programs and those working in the private sector often have differing perspectives on the role of these principles. The Social Insurance and Public Finance Section provides an opportunity for a constructive exchange of ideas and improved understanding of how social insurance and other government-sponsored programs may differ from seemingly similar private ones.

Our section is active in diverse projects and has been expanding its collaboration with other sections. We sponsored two sessions at the 2015 SOA Annual Meeting & Exhibit, one on actuaries' responsibility to the public and one on assumptions and methods used for Social Security estimates. We also co-sponsored a hot breakfast with the Health Section, our first in an Annual Meeting. By the time this newsletter is published, we will have held a webinar on Medicaid Long-Term Services and Supports, from our health sub-group, and one on global social security reforms in collaboration with the International Section. We are also planning a webinar on Social Security's Disability Insurance program, and the effect of recent legislation, early in 2016. Other ongoing projects include a long-term care research project with a focus on funding, challenges and potential alternatives and their impact on Medicare and Medicaid, as well as a research project to investigate funding issues of long-term health benefits for retirees in the public sector. We also continue to look into public pension issues.

If you have interest in these ongoing projects, or ideas for new ones, the section would welcome your participation. ■

The Social Insurance and Public Finance section provides an opportunity for a constructive exchange of ideas and improved understanding of how social insurance and other government-sponsored programs may differ from seemingly similar private ones.



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Employer-Sponsored Health Insurance Under the ACA

Impacts from the Cadillac Plan Excise Tax

By Paul R. Houchens

**In omnibus spending legislation pending at the time of this publication, the Cadillac plan excise tax's scheduled implementation date is delayed until 2020. Additionally, the legislation proposes the tax will now be deductible from an employer's gross income.*

Beginning in 2018, the Patient Protection and Affordable Care Act (ACA) introduces an excise tax on the value of high-cost employer-sponsored health insurance plans. The tax, known commonly as the “Cadillac plan excise tax,” has the potential to change the dynamics of the employer-sponsored insurance (ESI) market for approximately 150 million Americans who are receiving health insurance benefits.¹ From a social insurance perspective, the Cadillac plan excise tax is a major change to U.S. tax policy, introducing federal taxation to employer-sponsored health benefits for the first time since the 1920s.² This article discusses the structure of the Cadillac plan excise tax and the potential effects of its implementation.

The basic structure of the Cadillac plan excise tax and developing regulatory framework

The Cadillac plan excise tax, scheduled to be implemented in taxable years after Dec. 31, 2017, is defined by Section 9001 of the ACA.³ The tax was included in the ACA to serve two purposes:⁴

Raise federal revenue to offset expenditures related to ACA insurance coverage expansion, including Medicaid expansion and premium assistance in the insurance marketplace.

Slow the growth in health care costs by incentivizing employers to offer less generous benefits. As stated by the Congressional Research Office, many economists believe the current ESI tax exclusion “encourages the overconsumption of health benefits.”

The following section provides a basic overview of the Cadillac plan excise tax structure and the developing regulatory framework.

What is specifically being taxed?

Employer-sponsored health insurance that has an “applicable coverage” cost per employee that exceeds the coverage limits de-

defined by Section 9001 of the ACA. Applicable coverage includes not only the cost of the insurance benefit (both employer and employee costs), but also employer and employee contributions to health reimbursement arrangements (HRAs), health savings accounts (HSAs), and flexible spending accounts (FSAs).⁵

What are the coverage limits for the Cadillac plan excise tax and how will they change in the future?

For calendar year 2018, applicable coverage cost that exceeds \$10,200 per employee for single coverage, or \$27,500 for non-single coverage.⁶ These amounts are indexed by the Consumer Price Index for all Urban Consumers (CPI-U) plus 1 percent in 2019 and, thereafter, only by the CPI-U.⁷ The Congressional Budget Office (CBO) estimates the CPI-U to grow at 2.4 percent annually from 2019 through 2025.⁸ Historically, growth in ESI premiums has exceeded the forecasted CPI-U growth rate. For example, Milliman's Medical Index, which tracks the cost of an average preferred provider organization (PPO) plan for a family of four, has experienced annual growth rates between 5 percent and 7 percent in the last five years.⁹

How is the tax calculated?

To the extent an employer's cost of applicable coverage exceeds the tax's coverage limits for a given calendar, the excise tax amount is 40 percent of the applicable coverage cost that exceeds the coverage limit. For example, if the cost of applicable coverage for single coverage is \$12,000 in 2018, the tax amount will be calculated as:

$$(\$12,000 - \$10,200) \times 40\% = \$720 \text{ excise tax amount}$$

Note that the \$10,200 is the 2018 single, unadjusted coverage limit.

The Cadillac plan excise tax amount is not deductible from an employer's gross income.¹⁰

How are employees grouped together for the purpose of determining the applicable coverage cost per employee?

Rather than calculating the average health insurance cost across all benefit options that an employer may offer, Internal Revenue Service (IRS) guidance suggests that the applicable coverage cost per employee will be determined for “similarly situated” employees.¹¹ Similarly situated employees would be defined first by benefit package and then split into employees with single or non-single coverage. For example, if an employer offered a PPO and a health maintenance organization (HMO) benefit option, the cost of applicable coverage would be determined (at a minimum) for four groups of similarly situated employees:

1. Single/PPO

2. Non-Single/PPO
3. Single/HMO
4. Non-Single/HMO

The IRS is considering guidance that would allow employers to further disaggregate employees by factors such as geographic location, job classification, and collective bargaining status.¹²

From a social insurance perspective, the Cadillac plan excise tax is a major change to U.S. tax policy, introducing federal taxation to employer-sponsored health benefits for the first time since the 1920s.

Will the applicable coverage limits be adjusted for any employer demographic factors?

Yes, the coverage limits will be adjusted for employees who are in high-risk professions and members who are pre-Medicare retirees.¹³ Further, the coverage limits will be adjusted upward if the age and gender characteristics of an employer's workforce are different from those of the national workforce.¹⁴ For example, if an employer employed only 60-year-olds, the coverage limit thresholds would be much higher than the 2018 standard \$10,200 and \$27,500 limits. Because of the permissible age and gender adjustment, the determination of whether or not an employer's health benefit options are subject to the tax in 2018 may be dependent on the age/gender demographics of each set of similarly situated employees.

IMPACTS FROM THE CADILLAC PLAN EXCISE TAX

How many employers may be subject to the tax?

Estimating the impact of the tax is a difficult endeavor for several reasons, including:

- Forecasting future premium trends,
- Lack of information related to employee age/gender demographics in ESI survey data, and
- Employers may modify existing benefit options to avoid hitting the tax.

With these caveats, estimates from the Kaiser Family Foundation (Kaiser) indicate that 26 percent of employers may have at least one single benefit option subject to the Cadillac plan excise tax in 2018, based on a 5 percent growth in employer premiums from 2015 through 2018.¹⁵ The Agency for Healthcare Research and Quality (AHRQ) estimated 10 percent of the national share of single coverage premium would be subject to the tax in 2018.¹⁶ Both entities estimate that the number of employers impacted by the tax will increase steadily over time as health care inflation outpaces CPI-U.

The CBO and the Joint Committee on Taxation (JCT) have estimated that only one-fourth of the \$87 billion expected to be generated by the tax in its first eight years of existence will be generated by direct tax receipts. Three-fourths of the \$87 billion in estimated revenue is expected to be generated from employers shifting compensation to wages (thus increasing taxable income) while decreasing the richness of health care benefits to avoid the excise tax.¹⁷

Regional impacts may vary

While the Cadillac plan excise tax provisions contain adjustments for high-risk professions, pre-Medicare retirees, and age/gender characteristics of employees, the statute does not adjust for other factors that may influence insurance costs, other than benefit design, including:

- Underlying provider reimbursement levels in the employer's geographic location,
- Employee health status (other than factors related to age and gender), and
- Administrative costs and other non-benefit expenses included with ESI coverage.

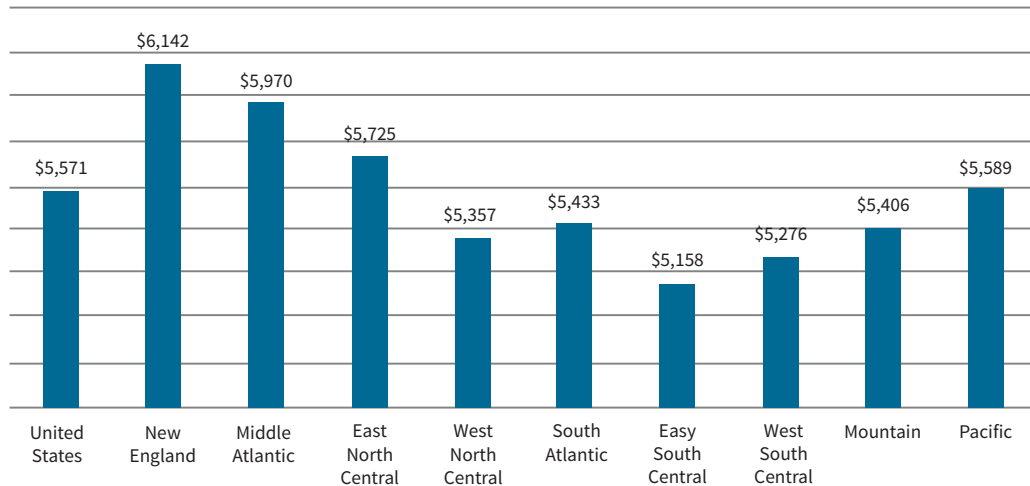
The combination of these factors may result in Cadillac plan excise taxes varying significantly across the country. To illustrate this potential variance, Figure 1 provides average regional (defined by the U.S. Census Bureau) premiums for single private-sector ESI coverage in 2013 from the Medical Expenditure Panel Survey.¹⁸

The average premium cost ranges from \$5,158 in the East South Central region to \$6,142 in the New England states, a percentage difference of nearly 20 percent. Given equal benefit designs, employers in high-cost states may be more likely to hit the excise tax coverage limits in 2018.

Employer reaction to the Cadillac plan excise tax

As stated previously, the Cadillac plan excise tax is intended to incentivize employers with high-cost health insurance options to provide less expensive health insurance benefits. While there are a number of means for an employer to achieve a reduction in health plan expenses, many employers review offered benefit designs (deductibles, coinsurance, copays, etc.) on an annual ba-

Figure 1
2013 Composite Private Sector Single Premiums
Medical Expenditure Panel Survey - U.S. Census Region



Note: Premium value variance may be attributable to demographic and benefit design differences between regions.

sis to create sustainable health care expense trends. For employers with high-cost insurance, the tax places an even greater value on reducing or mitigating health care trend increases. To the extent that future health care trends outpace general inflation, the excise tax may result in employee cost sharing increasing at a faster rate than historically observed. The 2015 Kaiser Employer Health Benefits Survey reported that, among large firms (200 or more workers), 13 percent of the firms have made changes to benefit design or coverage to decrease the likelihood of exceeding the excise tax coverage limits in 2018.¹⁹

For employers in collective bargaining agreements, it may be necessary to do a more long-term analysis of the potential impact from the Cadillac plan excise tax. Such an employer may not have the ability to make annual benefit design changes, making it optimal to estimate the effects of the tax during contract negotiations.

Because the excise tax provisions do not contain any adjustment for employee morbidity, other than age and gender demographics, the tax also implicitly places a greater value on an employed population's health status. All else equal, an employer with a relatively healthy workforce will be less likely to hit the excise tax coverage limits than an employer with a workforce in relatively poor health. Therefore, the excise tax provisions may result in higher investment in population health management by employers, as the potential return on investment will be higher beginning in 2018.

Despite the introduction of the Cadillac plan excise tax in 2018, the proportion of large employers offering ESI, 95 percent in 2013,²⁰ may remain high for several reasons:

- **Majority of individuals with ESI are not eligible for marketplace premium assistance.** On a national basis, it is estimated that more than 50 percent of non-elderly individuals with ESI had household incomes above 400 percent of the federal poverty level, making them ineligible for any premium assistance in the insurance exchanges.²¹
- **ACA employer mandate.** The ACA introduces an employer mandate penalty of approximately \$2,000 per each full-time employee if a large employer fails to offer health insurance coverage to its full-time employees.²²
- **ESI tax exclusion.** With the exception of introducing the ESI Cadillac plan excise tax, the ACA maintains the ESI tax exclusion, which allows employers to offer health insurance benefits as a nontaxable benefit to employees. The tax exclusion, estimated at \$151 billion in federal fiscal year 2015, is the single largest federal tax expenditure.²³ The ESI tax exclusion is most valuable for higher-paid employees. For example, a \$10,000 health insurance benefit would provide an employee in the 10 percent marginal tax rate bracket with \$1,000 in tax savings. However, an employee in the 35 percent marginal tax rate bracket would receive \$3,500 in tax savings.

Employee decision making

To the extent that households with ESI are faced with higher cost-sharing requirements under their insurance plans, the demand for health care price transparency may increase as a greater number of Americans will be exposed to significant cost sharing under their health plans. Resources and tools offered by insurers or third-party vendors to evaluate the cost of health care services

may become standard features of many employer-sponsored plans.

If employer-sponsored health plans become significantly leaner (higher cost sharing), many low-income Americans may prefer to receive health insurance through the insurance marketplaces.

The availability of both premium assistance and cost-sharing subsidies²⁴ for qualifying households may create situations where total health care expenses (premium and cost sharing) in a marketplace plan are considerably less than coverage offered by an employer. The ACA requires employers to offer a plan with an actuarial value of at least 60 percent (paying 60 percent of health care expenses, on average). In the marketplace, cost-sharing subsidies provide coverage that has an actuarial value of approximately 90 percent for households with income below 200 percent of the federal poverty level (approximately \$24,000 for a single individual in 2015).²⁵

However, the ACA's structure does not permit individuals who are eligible for employer-sponsored coverage (meeting certain minimum value and affordability standards) to receive premium assistance or cost-sharing subsidies in the marketplace.

Because of these dynamics, some low-income individuals may actually prefer that their employers not offer health insurance. Particularly for small employers that are not subject to the ACA's employer mandate, not offering insurance may be more valuable than offering it to a certain subset of employees.

CONCLUSION

The Cadillac plan excise tax has the potential to significantly impact the characteristics of insurance coverage offered by employers. The tax may be one of the most visible pieces of the ACA, with the potential to affect the health insurance of 150 million Americans. The Cadillac plan excise tax is likely to be a key component of health policy debates as we approach the 2016 presidential election. ■

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Understanding the Valuation of Public Pension Liabilities Expected Cost versus Market Price

By Paul Angelo

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With US state and local economies in slow recovery, workforce costs—including pensions and other benefits—remain front-page news. Taxpayers and public officials want to know the size of their financial obligations to employees and retirees for retirement benefits to assess how much it will cost—today and in the future—to meet those obligations.

Determining these obligations should be straightforward because governmental accounting standards and professional actuarial standards outline accepted methods for measuring pension liabilities. In particular, current practice measures pension obligations using long-term assumptions and methods, including an expected rate of return on plan assets. But alternative measures of pension liabilities are increasingly reported in the press. One measure might peg the size of the liability as two or even three times the size of the liability measures currently in use. As a result, a great deal of confusion and controversy has resulted over which measure is “correct.”

The controversy around measuring pension liabilities centers on a familiar subject for sponsors of public pension plans: the applicability of what is called the “market value of liabilities” (MVL) to public-sector pension obligations.¹ This paper explores the conceptual differences between two competing measures of liabilities: current practice versus the market-based measure. It also examines which measurement is most useful for public-sector decision makers. Finally, it reviews some of the issues that have yet to be resolved regarding measuring these pension obligations.

BACKGROUND: CURRENT PRACTICE VERSUS MARKET-BASED MEASUREMENT

Current practice for measuring the pension liabilities of public-sector pension plans provides information to plan stakeholders and decision makers about how much it will cost over time to satisfy the financial obligations to participants. This is accomplished by calculating what is called an actuarial accrued liability (AAL), which is based on both current information and reasonable expectations of future events.² The AAL measure is based on long-term methods and assumptions. It not only takes into account the service and pay earned by employees, but also anticipates future service and pay raises, which will increase the plan’s obligations. Current practice also incorporates information about the future investment earnings of the plan’s assets when selecting what is called the “discount rate.”³ In determining the AAL, the discount rate used to calculate public-sector pension liabilities is the long-term expected investment return on the plan’s investment portfolio.

The MVL approach differs from the AAL approach in important ways, especially when it comes to the discount rate. MVL measurements ignore expected investment earnings, and instead use current market rates of interest on relatively secure fixed-income instruments (for example, US Department of the Treasury rates or high-grade corporate bond rates). As discussed in the next section, the theory behind the MVL measure is that because public-sector pension benefits are fairly certain to be paid, they should be valued the same way that the market prices securities that have a similarly low “default risk.” This would indicate the use of the lowest current market interest rates, which are often called “risk free” rates. Note that “risk free” does not mean such rates are free of investment risk, but rather that they are the rates implicit in the market pricing of securities that, like public pensions, have low default risk.

There are other important differences between the AAL and the MVL. For instance, the MVL uses a much narrower definition of future benefits to calculate a plan’s liabilities, one that assumes that pay and service are frozen at current levels.⁴ However, our discussion will focus on the current controversy surrounding the discount rate: when measuring public pension liabilities and costs, should future benefit payments be discounted by using the expected long-term return on plan assets or by using current market interest rates?

TWO APPROACHES, TWO FUNDAMENTALLY DIFFERENT CONCEPTS

The MVL method differs from the current AAL approach at the most basic and conceptual level. The AAL and MVL are measurements that are designed to answer fundamentally different questions. Consequently, the usefulness of the information they impart depends on the needs and purposes of any given user.

The AAL provides information about expected actual costs to the employer and, ultimately, to the taxpayer; it is the best estimate of what it will cost to provide pension benefits today and into the future. This is why benefit obligations are discounted using the long-term expected return on plan assets. Since investment earnings reduce the net cost to the employer, an estimate of future investment earnings is appropriate in a measurement whose primary purpose is to inform stakeholders about current and future costs.⁵

The MVL, on the other hand, is not directly concerned with the question of funding. It is a measurement designed to estimate the theoretical market price of a plan's obligations. There are a couple of "what-if" scenarios that illustrate the meaning of this market price. For example, the MVL may be viewed as a "replacement value," meaning the price the market would charge if all plan participants wanted to replicate their accrued pension benefits by purchasing fixed-income securities that would provide the same stream of income.

Another way to view the MVL is as a "settlement value," which is what the market would charge if the employer were able to terminate the plan and transfer its benefit obligations to a third party.⁶ Under either of these scenarios, liabilities should be valued independently of the long-term expected return on assets, since the question being asked is: what is the market's "going price" today if the benefits are to be provided by fixed-income market instruments rather than long-term invested assets?⁷ Consequently, the MVL discounts benefit obligations by using current returns on fixed-income instruments instead of using the rate that plan assets are expected to earn.

The discount rate is one of the most significant factors in measuring any long-term obligation. A lower discount rate will produce a larger measure of the obligation, and vice versa. Given the importance of the discount rate in valuing long-term obligations, these two approaches to discounting—using long-term expected returns versus current market bond rates—will result in very different measures of a plan's liabilities. In today's low-interest-rate environment, an MVL measure will produce a liability that is substantially greater than the current expected return method would produce. Under alternative macroeconomic conditions (such as the high-interest-rate environment of the early 1980s), the MVL would result in a much smaller liability than the AAL.⁸

However, policymakers, trustees, and plan stakeholders are less concerned with broad conceptual differences and more concerned with the practical question of which measure is most useful for their purposes. The informational value of either measurement depends on what the users really want to know. Indeed, in its recent revisions to the governing Actuarial Standard of Practice (ASOP), the Actuarial Standards Board (ASB) stated



clearly: "the actuary should consider the purpose of the measurement as a primary factor in selecting a discount rate." This focus on the purpose of the measurement is found throughout the revised ASOPs that apply to both the measurement of pension obligations and the selection of discount rates.⁹

FINDING PURPOSE AND MEANING IN LIABILITY MEASUREMENTS

To the extent that funding costs are the overriding practical concern facing stakeholders of public-sector plans, it is easy to see how the AAL measurement provides viable information that can be used for hands-on decision making. Decision makers must be concerned not only with the here and now, but also with anticipating future developments. Because the AAL qualitatively and quantitatively incorporates more information than MVL measurements—information about future increases in the plan's benefit obligations (by incorporating future service and salary increases) and about expected long-term earnings on plan assets—it more accurately measures the likely financial burden of the plan on an employer. As a result, the AAL provides useful information to an employer seeking to understand how the plan fits in with the employer's overall financial position, or to trustees seeking to ensure the long-term viability of the plan.

There are few similar, practical applications in the public sector for MVL measurements, which were developed to address specific financial and policy concerns that are faced by corporations sponsoring defined benefit plans. As noted in the previous section, one interpretation of the MVL measure approximates the market replacement value of benefits earned to date by plan participants. This is inconsistent with the basic reason why pension plans are established: to provide employers with a more efficient, cost-effective means of delivering retirement benefits

than simply having individual employees obtain those benefits at fixed-income market rates. Although calculating this market replacement value of benefits might make for an interesting illustration of the economic efficiency of pension plans, it has limited relevance for trustees or employers looking for information on a plan's current and long-term prospects.

Another interpretation of the MVL—as a measure of a plan's settlement value or "termination liability"—may be useful in the context of single-employer corporate pension plans, where federal law specifically permits an employer to terminate a pension plan and provides an explicit regulatory protocol for doing so. Corporate employers that decide to terminate their pensions must either pay an insurance company to issue annuities to pay plan participants or hand over control of the plan and its assets to the federal Pension Benefit Guaranty Corporation, which values pension liabilities in a way that mirrors annuity pricing.

This is why MVL measurements that are used in the private sector are often designed to approximate settlement values for the pension benefits. A corporation's creditors or a potential merger or acquisition partner will be interested in the net termination value (market price) of the firm's pension obligations. None of this is generally relevant to public-sector plans, which are governed by state and local laws and statutes that do not contemplate termination.¹⁰ For discussions about the likely cost of a public-sector plan for a sponsoring employer or the long-term financial health of the plan, MVL estimates will be inaccurate at best and misleading at worst, because these measurements explicitly exclude information about funding costs.

RECENT DEVELOPMENTS: THE GASB AND ASB

This discussion might raise the question: if current practice is so useful, why did both the Governmental Accounting Standards Board (GASB) and the ASB decide to review it? The answer is that, like any standards, those governing the calculation of pension liabilities are, and should be, subject to periodic review to ensure that they are meeting the needs of stakeholders. It is significant that the GASB and the ASB have reaffirmed the basic conceptual framework underlying the AAL and the appropriateness of using the expected rate of return to discount pension liabilities for both accounting expense and funding cost. However, these reviews have raised some important questions, and the answers may have an impact on public plans.

One of the critical questions concerns how to reconcile the AAL measurements with the actual contribution behavior of a plan's sponsor. The AAL anticipates long-term investment returns on plan assets. However, the liability and cost estimates will only be accurate if the plan sponsor is actually funding the plan in accordance with the actuarially determined needs of the plan. To the extent that an employer fails to fund the actuarially required contributions, the plan will fail to achieve the investment earnings

it expected. Consequently, the AAL, as traditionally calculated, may be underestimating long-term plan costs. (For information on whether investment earnings assumptions are too high, see the sidebar "Selecting an Expected Investment Return.")

Decision makers and stakeholders certainly need reliable information on the consequences that flow from a failure to appropriately fund a plan. In its revised accounting standards, the GASB determined that liabilities should continue to be calculated using the expected return on plan assets for plans that are being properly funded on an actuarial basis. However, for those not being funded in accordance with the actuarially determined needs of the plan, GASB determined that liabilities should be discounted using a "blended rate."

Under the GASB's approach, only benefits that are projected to be funded from plan assets are discounted using the expected return on plan assets, while any remaining benefits are discounted using a current bond index rate.¹¹ This provides an explicit measure of the cost of long-term underfunding by denying the use of the long-term earnings rate for future unfunded benefit payments. Note that in contrast, because MVL measures are divorced from the concept of funding, they offer no information on the incremental cost of a failure to fund future benefits.

As for the actuarial standards (ASOPs), as noted earlier the ASB has issued revised standards both for measuring pension obligations and for selecting discount rates. Unlike the GASB's accounting and financial reporting standards for public plans, pension ASOPs apply to all actuarial measurements related to pensions and are therefore much wider in scope. That is why rather than attempting to specify particular measurements, the revised pension ASOPs require that, "[w]hen measuring pension obligations and determining periodic costs or actuarially determined contributions, the actuary should reflect the purpose of the measurement."¹²

Under this guidance, just as the GASB has determined that expected earnings is the appropriate discount rate for the purpose of measuring accounting cost (in other words, expense), expected earnings is also the appropriate discount rate for the purpose of measuring funding cost (in other words, contributions). This is evident in the following excerpt from GASB Statement 68, which applies equally well to both accounting and funding cost:

"The amounts that are projected to be provided by pension plan investment earnings represent a reduction in the employer's expected sacrifice of resources to satisfy the obligation for pensions. Therefore, if the potentially significant effect of pension plan investment earnings is not considered in the measurement of the pension lia-

Selecting an Expected Investment Return

Aside from the issue of market-based discount rates, there is also an active discussion on editorial pages and in board meetings as to whether the current long-term expected earnings assumptions used by public plans are too high. This is a valid topic for discussion. Indeed, trustees and their actuaries routinely review investment earnings assumptions. They may periodically revisit and change their earnings assumptions, either because of changes in asset allocation or changed future market expectations. This is entirely appropriate.

Unfortunately, this discussion has a tendency to get muddled with the MVL debate, because some commentators who champion the use of the MVL for public plans also claim that it justifies a more conservative, and therefore more appropriate, long-term earnings rate.

The MVL debate has no bearing on the selection of the long-term expected earnings rate because the MVL measure is not based on future returns on a plan's invested assets. It explicitly avoids forward-looking assumptions about the expected return on a plan's assets, since these are not relevant to determining the market replacement value, nor would they be relevant in the context of a plan termination.

Another proposed use for MVL measures, and particularly the market-based discount rate, is to illustrate the downside risk associated with using a long-term earnings-based discount rate. Even here, the MVL terminology can be misleading. The market-based discount rate is commonly referred to as the "risk-free" rate, even though using such a discount rate would not preclude future investment losses relative to that assumption.*

A more meaningful illustration of investment risk is to show results under alternative investment return scenarios, perhaps with the expected probabilities associated with the different outcomes.

While discussions of appropriate long-term earnings assumptions and their associated risks should be encouraged, they should not be influenced by arguments based on liability measures that are unrelated to expected investment earnings.

* In fact, the term "risk-free" rate does not refer to investment risk at all. Rather, it is the rate that the market would use to price a cash flow that is sure to be paid, and thus free of default risk.

bility, the Board believes that amounts recognized by the employer, including the employer's cost of services associated with pensions as they are earned, potentially would be misstated."¹³

Under the revised ASOPs, there may be purposes for which a market-based MVL measure would be appropriate. These might include settlement values for withdrawing employers (as discussed earlier) or values for use in market-based financial economic models.¹⁴ Nonetheless, the expected earnings-based AAL is most consistent with the purpose of measuring the current costs and accrued liabilities for an ongoing public pension plan.

CONCLUSION

Liability measurements must be useful and relevant to inform stakeholders. The AAL imparts information about the issues that are most important to decision makers: the expected costs associated with funding promised benefits. The MVL measures are far less useful for public-sector plans because they are not designed to answer the critical questions facing policymakers, employers, and trustees related to the expected cost of current and future benefit obligations.

In many cases, actions to resolve the difficult issues facing public-sector pension plans in the present fiscal environment will have to include implementing appropriate funding policies and disciplines, as well as developing sustainable benefit designs. Those policies and plan designs should be evaluated using measures consistent with the purpose of the measurement—determining the resources needed to fund the pension obligation—and not on a theoretical market price of that obligation. ■

NOTES

This paper is based on The Segal Company's June 2011 Public Sector Letter. See The Segal Company, "Actual Cost vs. Market Price: Does Market Valuation of Pension Liabilities Fit the Public Sector?," June 2011, www.segalco.com/publications/publicsector-letters/june2011.pdf.

ENDNOTES

- ¹ For an introduction to the MVL approach to valuing pension liabilities, see The Segal Company, "Market Value Liability and Public Pension Plans: A Continuing Controversy," January 2009, www.segalco.com/publications/publicsectorletters/jan2009.pdf.
- ² The AAL is the liability for all service to date. A pension valuation also determines a "normal cost" for active members, which is the cost for the next year of service. For active members, the AAL is the current value of the normal costs for past years of service. For inactive members, the AAL is simply the present value of their future benefits.
- ³ Any current measure of a pension plan's liability is essentially a calculation, in current dollars, of some portion of the value of future benefit payments. In recognition of the time value of money, future benefit payments must be "discounted" to arrive at a value today.

⁴ For a detailed description of these differences, see The Segal Company, “Market Value Liability and Public Pension Plans.”

⁵ Note that this applies not only to funding cost (contributions) but also to accounting cost (expense). In its recently released revised accounting standards for pensions (Statements 67 and 68), the Governmental Accounting Standards Board states that, when setting the discount rate for financial reporting, “the amounts that are projected to be provided by pension plan investment earnings represent a reduction in the employer’s expected sacrifice of resources to satisfy the obligation for pensions. Therefore, if the potentially significant effect of pension plan investment earnings is not considered in the measurement of the pension liability, the board believes that amounts recognized by the employer, including the employer’s cost of services associated with pensions as they are earned, would potentially be misstated.” See Governmental Accounting Standards Board, “Statement No. 68: Accounting and Financial Reporting for Pensions,” June 2012, paragraph 228.

⁶ In practice, to terminate a plan, the employer would have to buy annuities. Because of margins, profit, and other factors, actual annuity prices would generally be higher than the theoretical MVL discussed here.

⁷ As noted earlier, the fixed-income instruments used here should have the same generally low default risk as is associated with public pension obligations.

⁸ This discussion only considers the effect of the different discount rates. If measured using the same discount rate, the MVL will generally be less than the AAL because the MVL does not reflect future service and salary increases.

⁹ Note that in the revised edition of ASOP No. 4, what we are calling the “MVL” is described as a “market-consistent present value.” See Actuarial Standards Board, “Actuarial Standard of Practice No. 4 (Revised Edition): Measuring Pension Obligations and Determining Pension Plan Costs or Contributions,” December 2013, www.actuarialstandardsboard.org/pdf/exposure/aso-p4_2nd_exposure%20draft_dec_2012.pdf; and Actuarial Standards Board, “Actuarial Standard of Practice No. 27 (Revised Edition): Selection of Economic Assumptions for Measuring Pension Obligations,” September 2013, www.actuarialstandardsboard.org/pdf/exposure/ASOP_No27_second%20exposure_2011.pdf.

¹⁰ There may be some limited contexts in which the MVL could impart useful information to public-sector plan stakeholders and decision makers. For instance, in cases where one employer wishes to withdraw entirely from a plan that covers multiple employers, the plan may calculate the value of that employer’s termination obligation to the plan using an MVL-type approach. Similarly, trustees of some plans may decide that an MVL approach is the correct one to use in determining purchases of service credit, since, in effect, the participant is purchasing future benefits that would otherwise need to be purchased in the market. However, these are the exceptions to the general situation of an ongoing public-sector pension plan.

¹¹ Note that the new GASB standards are sometimes misinterpreted to require that the blending of the expected return and bond index rate is based on the current funded status of the plan. This is incorrect. As described earlier, the blending of these two rates depends on whether projected benefits will be covered by projected assets, including future contributions to fund those benefits. For that reason, the inclusion of the bond index rate in the discount rate depends more on having future contributions based on an actuarially sufficient funding policy and less on the current relationship between plan assets and liabilities.

¹² Actuarial Standards Board, “Actuarial Standard of Practice No. 4 (Revised Edition);” and Actuarial Standards Board, “Actuarial Standard of Practice No. 27 (Revised Edition).”

¹³ Governmental Accounting Standards Board, “Statement No. 68,” paragraph 228.

¹⁴ Another purpose often suggested for MVL measures is to illustrate the downside risk associated with using an expected earnings-based discount rate. This is discussed in the sidebar “Selecting an Expected Earnings Assumption.”

AUTHOR’S NOTE:

This article was prepared in May 2013 for a forum sponsored by the American Enterprise Institute. At that time, revisions to ASOPs 4 and 27 were both at the “Second Exposure Draft” stage; the final Revised Editions were released in December and September 2013, respectively. This article has been updated to refer to those Revised Editions of the ASOPs and to reflect their final texts wherever they differed slightly from the quotes taken from the Exposure Drafts.

The appropriate roles of “level cost” models versus “market pricing” models¹ in valuing public pension obligations and liabilities continue to generate debate and discussion. As discussed in the article, ASOPs 4 and 27 provide the key insight that the type of model used should reflect the purpose of the measurement. However, these ASOPs (and ASOP 27, in particular) also contain what I think is a new—or at least a clarifying—insight on the relationship between type and purpose of measurement, particularly when it comes to market pricing measures.

Generally, there is a clear distinction between the type and the purpose of a pension measurement. If the purpose of the measurement is funding, corporate plans generally use market pricing types of measures (e.g., the OBRA ’87 “current liability” and the PPA ’06 “target liability”), while public sector plans generally use level cost types of measures. The same is true if the purpose of the measurement is financial reporting. For purposes of defeasance or settlement, generally both corporate and public plans use a market pricing type of measure, either based on a theoretical market value or from an actual market transaction.

However, when ASOP 27 (in Section 3.9) lists possible purposes to consider when selecting a discount rate, it includes “market-consistent measurement” as one of the possible purposes of measurement. In effect, this means that the underlying justification for wanting a market pricing type of measure may simply be that it is the value that is most consistent with a market-based financial economic model. Perhaps the framework of ASOP 27 will allow for a clearer identification of this purpose, whatever other purposes may be proposed to justify the disclosure of a market pricing type of measure for public pension obligations.

ENDNOTES

¹ “Level cost” models use assumed expected return discount rates and (most often) level cost actuarial cost methods. “Market pricing” models use observed market return discount rates and accrued benefit actuarial cost methods. The article uses “expected cost” in its title only because it focuses on the discount rate aspect of this type of model.

— Paul Angelo ■



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Social Security Changes for 2016

By Bruce D. Schobel

Every October, the U.S. Social Security Administration announces certain changes in program amounts that occur automatically—i.e., 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. 15, 2015, the government announced that no Social Security COLA will be effective for December. The absence of a COLA has other consequences, too.

BENEFIT INCREASE

Since 1984, Social Security's COLAs have been based on the third-quarter-to-third-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 year-to-year from the third quarter of 2013 through the third quarter of 2014; accordingly, all monthly Social Security benefits rose effective December 2014 by 1.7 percent. But since the third quarter of 2014, the average quarterly CPI-W has remained lower than it was then, even though it has risen and fallen from month to month. Thus, because the average CPI-W did not rise over the applicable measuring period, no benefit increase can occur for December 2015. The same thing happened—i.e., no COLA was effective—for December 2009 and December 2010.

MAXIMUM TAXABLE AMOUNT AND TAX RATES

Other automatic Social Security changes, which are ordinarily announced simultaneously with the COLA, are based on changes in the national average wage, which the Social Security Administration computes from W-2 data. One very important change that affects workers (employees and the self-employed) is the increase in the maximum amount of earnings subject to the Social Security payroll tax each year. The maximum taxable amount increased from \$117,000 for 2014 to \$118,500 for 2015. But in the absence of a COLA, the maximum taxable amount does not rise. Accordingly, it will not rise for 2016. The Social Security tax rate, on the other hand, is fixed by law, with 6.2 percent withdrawn from each employee's pay and matched with

an employer contribution of 6.2 percent. The self-employed pay both halves of this tax.

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 \$15,480 for 2014 to \$15,720 for 2015, and there it will remain in 2016, due to the absence of a COLA. For beneficiaries who reach their NRA in 2016, the exempt amount remains at the 2015 level of \$41,880 for earnings in the months before reaching NRA. Since January 2000, workers who have reached their NRA under Social Security can earn unlimited amounts without causing any reduction in their Social Security benefits.

COVERAGE CREDITS

Interestingly, certain wage-indexed program amounts are permitted by law to increase (or even decrease) with or without a COLA occurring. For example, the amount of earnings needed to receive one coverage credit was \$1,220 in 2015 and will rise to \$1,260 in 2016, based on the increase in the national average wage from \$44,888.16 in 2013 to \$46,481.52 in 2014 (the latest available year, because 2015 wasn't even over yet when the announcement was made). Workers who earn at least \$5,040 in Social Security-covered employment (or self-employment) during 2016 will receive the maximum four coverage credits for the year. (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. The two PIA bend-points for workers first becoming eligible for benefits in 2016 are \$856 and \$5,157. The three MFB bend-points for 2016 eligibilities are \$1,093, \$1,578 and \$2,058. Corresponding amounts for earlier years of eligibility are available at ssa.gov. ■



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Public Pension Crisis Role of the Actuarial Profession

By Jeremy Gold

The views expressed in this article are solely those of the author. The Society of Actuaries takes no position on the views of the author. The Actuarial Standards Board (ASB) was offered, but declined, an opportunity to respond to the comments concerning the ASB.

Last Summer I was invited to be the luncheon speaker at the MIT Center for Finance and Policy Second Annual Conference: Financial Products and Policies for an Aging Population.¹ My subject was the public pension crisis, and I chose to focus on the role of the actuarial profession.

“I am here to tell you a story about how a profession failed to fulfill its duty to the public and thus enabled and abetted the current very real crisis in public pension plans” were my opening words. I am not asserting that public pension actuaries caused the crisis, but I am asking, “Where are the screaming actuaries yelling ‘fire’ in these burning theaters?”

Why aren’t public plan actuaries warning the public about the dire funding status of too many state and local pension plans? I do not accuse individual practicing actuaries of any dereliction of duty in this regard. Rather I point to duties that members of a profession have to their clients (“Principals,” per our Code of Professional Conduct—the “Code”) and that the profession itself has to the public. In general, the boards of trustees of public pension plans do not want “screaming actuaries yelling ‘fire.’” Nor do they want actuarial calculations and reports to call for high contributions. In order to fulfill its duty to the public, the actuarial profession, rather than individual actuaries, must set limits on just how accommodating practicing actuaries can be to the Principals, especially when there can be negative implications for a larger public.

PUBLIC PENSION CRISIS

Although unimaginable a few years ago, we have now seen cities in bankruptcy and states in dire straits. Detroit’s bankruptcy in 2013 was certainly noted by news media and informed Americans, most of whom realized that public pension plans had something to do with Detroit’s financial difficulties; so too when California cities Stockton and San Bernardino went bankrupt in 2012.

Illinois, New Jersey, Kentucky and Connecticut have pension funding problems that have repeatedly been in the news. Although there is some awareness that things are not going well, along with some efforts by legislatures and executives to reform pension benefits and funding, there does not appear to be a public sense of crisis or impending doom.

States like South Dakota, North Carolina and a few others are seen as pension-healthy, with reported funding ratios at or close to 100 percent. Economists who’ve looked at these reports have re-estimated the ratios at 70 percent or lower. We are now in the seventh year of a bull market. If funding ratios are supposed to average 100 percent over market cycles, shouldn’t they be well above 100 percent today?

Some of the most troubled localities (e.g., Chicago and the four states named above) have reported funding ratios below 50 percent and have economic funding ratios below 30 percent. Can future taxpayers bear these burdens? Will a market miracle (e.g., a doubling of default-free rates and the S&P 500 Index) provide a *deus ex machina*? More likely we will see a combination of cutbacks in public services, increased taxes, and benefit reductions. We may not be able properly to educate Johnny, born in 2015, because we still haven’t fully paid for the benefits being paid to Mr. Smith, a teacher, who retired in 1992.

Although the public is only beginning to sense that the public pension funding crisis is real and potentially spread widely across the nation, actuaries, pension and not pension, should be very aware that the worst is yet to come. But pension actuarial methods and assumptions continue to kick the can down the road while life, health and property casualty actuaries appear unconcerned. The entire profession shares the name “actuary” as well as the public respect that it has earned over decades. Thus the entire profession must also share the risk that the brand could be critically tarnished if public pensions continue to stress the finances of our cities and states.

I identify two ways in which the actuarial profession contributes to the crisis: a science problem and a professionalism problem. Although the science problem—mismeasurement of pension liabilities and costs—is critical, it has been addressed often and thus most of this article is concerned with the latter problem. Our actuarial institutions are not designed to accommodate new ideas that threaten the contentedness and complacency of our clients. I look at the professionalism problem in terms of duties we have: to educate ourselves, to serve our clients with integrity and skill, to serve the public when our actions have impact. I am most critical of how our Actuarial Standards of Practice (ASOPs) are developed and maintained.

THE SCIENCE PROBLEM—MISMEASUREMENT

In 2008, the vice-chair of the U.S. Federal Reserve, speaking to public pension plan executives, said:²

Among economists “there is no professional disagreement: The only appropriate way to calculate the present value of a very-low-risk liability is to use a very-low-risk discount rate.”

The audience at MIT included many economists, all of whom agree that liability discounting should be based on the riskiness of the **liabilities**, not on the riskiness of the **assets**. For more than a decade I, and others, have pointed to weaknesses in the pension actuarial model, especially to the anticipation of expected returns on risky assets in the determination of plan liabilities and contributions.³ Over that same period the average discount rate for public pension plans has been very close to 8 percent, even as returns on non-risky assets have declined from about 8 percent in 1990 to 6 percent circa 2000 to less than 3 percent today.

The rate of discount for the purpose of determining plan liabilities and contributions is frequently set by boards of trustees or legislative bodies. Those with the authority to set discount rates often solicit actuarial input but, almost equally often, they lean on actuaries to make recommendations that the decision-makers want to hear and, in some instances, the decision makers feel free to ignore actuarial recommendations. Since most of the actuaries performing valuations for public plans are outside consultants operating in a competitive environment, they cannot be expected to push vigorously for much lower discount rates and higher annual contributions. Actuaries entirely compliant with our Code and ASOPs need only satisfy themselves that discount rates are reasonable estimates of expected returns.

A fundamental principle of public finance, **intergenerational equity**, has been stated by Alicia Munnell:⁴

“... each generation of taxpayers should pay the full cost of the public services it elects to receive.”

The continued use of discount rates in excess of 7 percent in a 3 percent environment defers current costs onto future generations of taxpayers. A payment of \$1000 due in 20 years is valued at \$554 when discounted at 3 percent but only \$258 when discounted at 7 percent. When today’s taxpayers contribute only \$258, more than half of the cost is passed on to future taxpayers.

THE PROFESSIONALISM PROBLEM—WHAT IS A PROFESSION?

One definition is simply a synonym for an occupation. “What is your profession?” “I’m a short-order cook in a diner.” And while the short-order cook may well take pride in his work, when we

talk about the actuarial profession, we have something else in mind more akin to what we think of when we talk about the medical, legal, and accounting professions.

For the MIT audience I identified five key attributes of a profession that are often referenced when talking about professions such as ours. These include: a body of knowledge, a system of education, a community, a duty to one’s employer and/or clients, and a duty to the public. I think most actuaries will agree that these attributes are pretty much what we have in mind when we call ourselves a profession.

Body of Knowledge

There can be little doubt that our profession includes a large body of knowledge that is derived from probability and statistics, economics and finance, demography, medicine and engineering. Some of these appear to a greater or lesser degree in our specialties of life, health, property casualty, risk management, financial reporting and pensions. One of our professional duties is to grow this body of knowledge, which we do through research. Because we borrow so much from the disciplines I just cited, we need to keep abreast of changes taking place therein.

Education

Basic education makes actuaries. Continuing education makes actuaries better. That’s how it should work and that is how it

I identified five key attributes of a profession ... these include: a body of knowledge, a system of education, a community, a duty to one’s employer and/or clients, and a duty to the public.

often does. By integrating more closely with academia, we have improved the preliminary syllabus, which is where we also find most of our interdisciplinary borrowing. I cannot comment on the later examinations and continuing education except in the area of pensions.

I would like the pension syllabus to prepare students for a 40-year actuarial career with content rich in enduring principles of retirement economics. For reasons not always in our control, the U.S. advanced pension syllabus is beholden to the regulators (e.g., The Joint Board for the Enrollment of Actuaries) and to the practical demands of pension consulting firms. Consulting firms want our basic education system to deliver pension actuaries capable of performing valuations, experience studies, cost studies, and filing governmental forms, what might be called “nuts and

bolts” productivity. Although these skills might be taught on-the-job, some consulting firms don’t want to lose productivity. Their expectations plus the demands of the Joint Board clutter an already tight syllabus.

Our education of new actuaries is overseen by committees of practicing actuaries who were taught by their predecessors and in turn teach their successors. This governance can lead to the best and worst of existing practice being passed across generations of actuaries. In partial mitigation of this, the committee overseeing the advanced pension syllabus has invited review by interested parties including academic economists. Nonetheless, the syllabus remains crowded with uneven and disjointed material, falling short of what I think should form the foundation of long careers based on enduring principles.

When things are happening in our “borrowed” areas of knowledge, real continuing education should be able to find its way into our programs and—this is the especially difficult part—it should have a real impact on the knowledge and practice of working actuaries. MIT is, of course, in the education business. I shared three quotes with them dealing with the difficulties in all educational efforts to replace stale knowledge with new ideas:

- “The difficulty lies, not in the new ideas, but in escaping the old ones ...” – John Maynard Keynes
- “It is difficult to get a man to understand something when his pay depends upon not understanding it.” – Upton Sinclair
- “Science advances one funeral at a time.” – Max Planck

What does this imply? That dynamic career-long learning might require greater effort than our profession is presently exerting—on the part of both our learners and our teachers. I don’t pretend that I know how to do this really well, but I am afraid that it is too easy to recognize that it is not being done well enough.

Community

Community is the fun part of being a profession. It is why most of us have many friends who are actuarial colleagues and why we enjoy going to actuarial meetings. Community is best reflected in face-to-face meetings with colleagues and, to a lesser degree, when we join interactive webcasts and bulletin boards, e.g., the Actuarial Outpost, as well as when we connect with and follow each other on LinkedIn and Twitter.

Community is an area where I think more positively than negatively about how we perform and support each other as a profession. Yet even here I have some concerns about how our leadership can look too much like an “old boys’ network” and how group think can arise in this context. We sometimes huddle too closely amongst ourselves and interact too little and not intensely enough with economists, accountants and other financial

professionals. Too often we merely recirculate actuarial interpretations of these disciplines without review and refreshment.

Duty to Clients

I believe that pension actuaries, often performing in a competitive consulting environment, are very good at serving their current clients. Unfortunately, in the public pension area, this has meant meeting client desires to keep liabilities and costs down despite declines in market interest rates over the past 30 years and continuing declines in mortality rates. Understated liabilities and costs favor current constituents (boards of trustees, elected officials, labor representatives) over future constituents and the general public. In addition to deferring contributions, actuarial underestimates have, until quite recently, led to public employee benefit increases well in excess of the wage concessions made in exchange.

Duty to the Public

The U.S. actuarial profession aspires to fulfill its responsibility to the public:

“The American Academy of Actuaries’ mission is to serve the public and the U.S. actuarial profession.”

The Code “require[s] actuaries to adhere to the high standards of conduct, practice, and qualifications of the profession, thereby supporting the actuarial profession in fulfilling its responsibility to the public.”

Why didn’t Detroit’s actuaries warn the public that the city’s pension plans were desperately underfunded? The simple answer: they didn’t have to. It is not reasonable to expect individual actuaries, operating in a competitive environment, to insist that their clients accept greater liabilities and higher costs because this is “in the public interest.” The actuaries who have served their public pension plan clients have, almost universally, followed the Code and all applicable ASOPs.

The public must be better served. This duty falls upon actuarial leaders and standard setters.

THE PROFESSIONALISM PROBLEM— ACTUARIAL STANDARDS OF PRACTICE

Today the public interest requires stronger disclosures and funding recommendations than those minimally required by today’s ASOPs. How can we know this? The proof is starkly visible. The best funded state pension plans are 100 percent funded after a seven-year bull market using actuarial methods that grossly understate the economic value of pension promises and defer costs far into the future.

According to the Code, we must behave ethically, meet U.S. Qualification Standards (including continuing professional development), and follow the ASOPs. Where in this mix are we

required to discover that pension actuaries are mismeasuring public plan liabilities and costs?

How do new findings in our feeder disciplines find their way into our practice and into our ASOPs? How do ASOPs learn? In general, our standards of practice are not derived from theory, nor even from fundamental actuarial principles, but rather come from changes in practice. A science-based profession cannot survive this way.

Learning from the Accounting Profession

The lay public expects professions to promulgate and enforce standards of practice. The most prominent such standards in the financial world are those of the Financial Accounting Standards Board (FASB). Seemingly comparable actuarial standards are promulgated by the Actuarial Standards Board (ASB); it is unlikely that the public is aware of how different these two sets of standards are in philosophy and detail.

FASB delivers top down best practice standards developed by full-time board members supported by a dedicated staff. Financial Accounting Standards are detailed prescriptions based on articulated principles. ASB standards are developed by part-time volunteer board members supported by volunteer committees, and driven by practice from the bottom up. They are brief, defer frequently to professional judgment, and assert that they define appropriate practice rather than best practice.

In the early 1970s, the accounting profession recognized that it had the relationship between principles and practice backwards:⁵

“APB [Accounting Principles Board] Statement No. 4 ‘Basic Concepts and Accounting Principles for Business Enterprises,’ issued in 1970, approached the problem backward by attempting to rationalize from existing practice to the concepts and principles, rather than formulating objectives upon which standards for practice could be based; it amounted to nothing more than a codification of existing practices.

“It was for this reason ... that the AICPA [American Institute of Certified Public Accountants] created two ‘blue ribbon’ bodies composed of both accountants and others in 1971⁶ ... which led to the creation of the FASB.”

The FASB has promulgated eight Concepts Statements, six of them issued by 1985, which are regularly reviewed and amended. These statements embody the principles of financial reporting recognized by FASB and are used to drive its standards of practice.

U.S. Actuarial Standards of Practice are written by the ASB. ASOP 1 describes how the ASB goes about its work. Section 3.1.4:⁷

“The ASOPs are principles-based and do not attempt to dictate every step and decision in an actuarial assignment. Generally, ASOPs are not narrowly prescriptive and neither dictate a single approach nor mandate a particular outcome. Rather, ASOPs provide the actuary with an analytical framework for exercising professional judgment, and identify factors that the actuary typically should consider when rendering a particular type of actuarial service. The ASOPs allow for the actuary to use professional judgment when selecting methods and assumptions, conducting an analysis, and reaching a conclusion, and recognize that actuaries can reasonably reach different conclusions when faced with the same facts.”

In July 2014, the ASB issued “ASOPs and Public Pension Plan Funding and Accounting—Request for Comments.”⁸ Question 4 asked: “In general, the ASOPs are principles based and not rules based. As a result, the ASOPs are generally not highly prescriptive. Should the ASOPs related to public plan actuarial valuations be more prescriptive?”

In November 2014, Robert Stein, chair of the SOA’s Blue Ribbon Panel (BRP), submitted comments on behalf of select members of the BRP. In response to Question 4:⁹

“We understand that a complex and changing environment is best addressed with principles-based guidance. However, we note that the current guidance does not articulate any principles and does not frame the method and assumption decisions within the context of maintaining consistency with such principles. Hence, above all we call for principles to be established.”

My own response to the same Question 4 included:¹⁰

“The ASB has repeatedly contrasted principles based versus prescriptive, almost as though they were antonyms, as though they were opposite ends of a range into which ASOPs must fall. Further, the ASB has clearly favored principles over prescriptions. Today, the ASB asks whether the circumstances surrounding pension standards might require some movement toward prescription and, presumably, away from principle.

“But the terms are not antonyms. Standards can be written that are principles based and prescriptive or practice based and not prescriptive. The FASB has always been principles based and has always written standards that are much more prescriptive than those that the ASB has written for pensions.”

When contrasted with the FASB approach, the assertion by the ASB that ASOPs are “principles based” rings hollow. Where are the principles?

ASOPs versus Science

Actuaries have long thought of themselves as members of a science-based profession. We are all familiar with the motto of the Society of Actuaries:

“The work of science is to substitute facts for appearances and demonstrations for impressions.”

With the ASOPs driven by practice, advances in actuarial science must enter practice before they can become standards. When the advantages of a scientific advance benefit our principals, it is not hard to understand how changes will flow into practice and then into ASOPs. But when the advanced science makes principals unhappy (e.g., greater pension contributions, higher insurance reserves), changes to practice and ASOPs are unlikely.

In 2004, the ASB updated the Introduction to ASOPs which described its process for setting standards. Eighteen (later 24) actuaries, including me, signed a letter¹¹ to the ASB criticizing a standard setting process that was grounded in practice rather than in scientific principles. We concluded:

“The signers believe that the ASB and its practice committees are the proper location for the exercise of professional analysis and judgment. Even if our profession lacks the resources to fund a full-time leadership institution à la FASB, our volunteers must be committed to independent decision-making informed by in-depth study of the actuarial science issues at hand. They must advance our science in front of our practice. Following, rather than leading, the practice is a prescription for stagnation and an invitation for outsiders to impose their rules upon us. We must lead or we will be led.”

In 2005, at the Actuarial Society of New York I presented “Setting Standards for Setting Standards”¹² which reviewed the history of actuarial standards, appealed to our professional desire to self-regulate, and concluded again: “We must lead or we will be led.”

How Well Have the Pension ASOPs Served the Public?

The pension actuarial model is broken. Excessive discounting and deferral of costs have often led to unaffordable promises made by past and current taxpayers to public employees, the cost of which will be borne by taxpayers and pensioners in the future. The degree to which this overhang exists has been downplayed by vested interests, including, too often, actuaries who, arguably, should know better.

From 2002 until now, I have tried to influence the profession’s educational activities (as an SOA volunteer), its policy posture (as an AAA volunteer) and its standard setting (via frequent comments to the ASB). With my MIT speech, I acknowledged to myself that my efforts inside the profession have moved it only slightly while the threats posed by the U.S. public pension sys-

tem are now moving much faster than our actuarial leadership is responding.

The public needs to be served. Instead of serving, our ASOPs are doing more to enable and abet the weaknesses in the political systems that run pension plans for public employees. We actuaries should have been the cops here, applying science while all those around us were doing politics. But competitive forces, weak standards, and poor training have made us part of the problem.

I am disappointed in myself and my profession. We have demanded too little from our practitioners and have been too willing to let weak pension ASOPs threaten the brand we all share. ■

ENDNOTES

- ¹ <https://www.youtube.com/watch?v=D-olXJUXe90&feature=youtu.be>
- ² Kohn, Donald L. 2008. Remarks at the National Conference on Public Employee Retirement Systems Annual Conference, New Orleans, LA. May 20. https://fraser.stlouisfed.org/docs/historical/kohn/kohn_20080520.pdf
- ³ Bader, Lawrence N. and Jeremy Gold. 2003. Reinventing Pension Actuarial Science. The Pension Forum, Society of Actuaries.
- ⁴ Munnell, Alicia H. 2012. State and Local Pensions What Now? Brookings Institution Press. Chapter 3, 1st sentence.
- ⁵ Hall, William D. and David L. Landsittel. 1977. A New Look at Accounting for Pension Costs. The Pension Research Council, published by Richard D. Irwin Inc. Chapter 3, Paragraph 4.
- ⁶ In 2013, the SOA commissioned the Blue Ribbon Panel on Public Pension Plan Funding. Its report is available here: <https://www.soa.org/blueribbonpanel>
- ⁷ <http://www.actuarialstandardsboard.org/asops/introductoryactuarialstandard-practice/>
- ⁸ <http://www.actuarialstandardsboard.org/asops/asops-and-public-pension-plan-funding-and-accounting-request-for-comments/>
- ⁹ <http://www.actuarialstandardsboard.org/wp-content/uploads/2015/03/Comment-53.pdf>
- ¹⁰ <http://www.actuarialstandardsboard.org/wp-content/uploads/2015/03/Comment-41.pdf>
- ¹¹ <http://users.erols.com/jeremygold/asopintrocommentsanon.pdf>
- ¹² <http://www.pensionfinance.org/papers/public.pdf>



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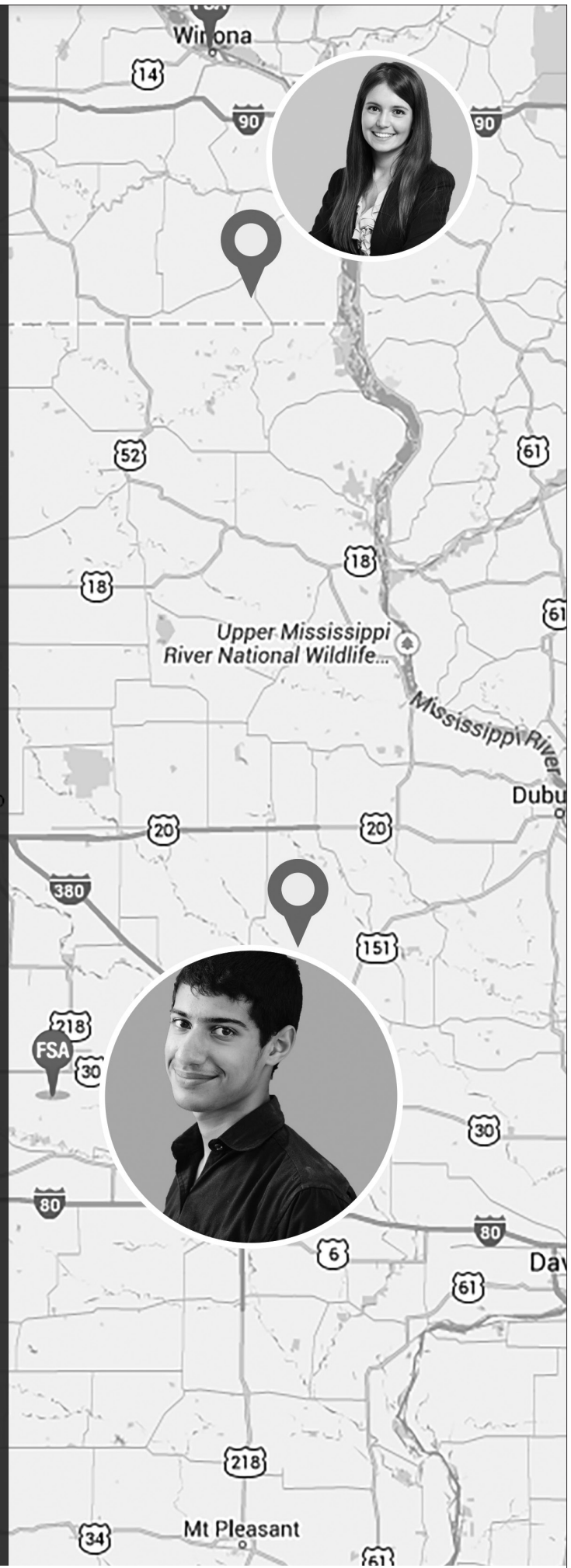
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