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THE AMAZING TRANSFORMATION OF RET I. REMENT

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IT WASN'T THAT LONG AGO that the world saw defined benefit and defined contribution as our only retirement system solutions. Today, actuaries are developing a brave new world of retirement designs and opening up new frontiers.

The latest phase of the SOA's *Retirement 20/20* initiative was a call for models. The call for models asked individuals to submit their ideas for new "Tier II" retirement systems—i.e., what is typically thought of as employer-provided retirement benefits that fit between social insurance and private savings. The call for models was the culmination of the *Retirement 20/20* work to date including three conferences which explored needs and risks for stakeholders in the retirement system (individuals, society, employers and the markets). Submissions were judged based on how well they met the criteria of the *Retirement 20/20* Measurement Framework (which considers needs and risks for the various stakeholders) and how well they handled issues of risk, governance, administration, transparency and transition. The Pension Section Council, in conjunction with the SOA, provided a $100,000 cash prize pool to be split evenly among the prize-winning papers. The Pension Section knew that it didn't want to select a single winner, as there would likely be several papers with very different, but equally worthy, ways of rethinking the retirement system.

As a result of the call for models, the SOA received 18 paper submissions from Canadian and American authors. We congratulate the four authors of the prize-winning papers:

- "The SERIOUS System: A New Model for Retirement Income Success," by Ken Beckman, ASA, MAAA.
- "The Tracker Plan: A Controlled Risk Defined-Contribution Retirement Program," by Rowland Davis, FSA.
- "Affordable Retirement Income through Savings and Annuities," by Don Fuerst, FSA, EA, FCA.
- "The Total Career Benchmark Model," by Tom Walker, FSA, FCIA.

Each of the prize-winning papers, as well as four other papers, formed the basis for our most recent conference, *Retirement 20/20: New Designs for a New Century*, held June 2–3 in Washington, D.C. A second conference, in cooperation with the CD Howe Institute and the Canadian Institute of Actuaries, will be held in Toronto in the fall.

We learned a lot, both from all the paper submissions and from the June conference. We'd like to thank all the paper authors and all the participants at the June conference. Even though we haven't yet held our Canadian conference, we want to take this opportunity to summarize some of what we have discovered to date.

WHAT WE LEARNED FROM THE PAPER SUBMISSIONS

The 18 papers submitted in the call for models considered a number of ways to reform the retirement system. Yet, common themes emerged. While no single paper embodies all themes, most submissions contain several similar ideas. This can be seen as a framework to begin discussions about building a stronger retirement system.

Most designs "look" like a defined contribution plan, in that the individual and employer make a contribution into an account each year. But the similarities typically end there. Common themes running through the papers include:

- **FOCUSING RETIREMENT ACCUMULATIONS ON INCOME PROVIDED.** Participants may never see an account balance, but instead see an income projection based on contributions made to date. Some designs directly invest in a deferred annuity. Others have a target benefit defined at retirement age. The plan may adjust the investment mix and sometimes require mid-course contribution adjustments to help assure the individual reaches the target by retirement.

  Some designs **REQUIRE OR DEFAULT INDIVIDUALS TO TAKE A PORTION OF THEIR BENEFIT AS INCOME.** In most designs, individuals can opt out of an income stream at retirement, but as a result they might face a penalty, or lose protection from downside investment risk. Note that in most designs, if the individual is required (or strongly incentivized) to take a portion of the benefit as income, that amount is typically limited. (This would represent the first layer in a two-layer system, as discussed later).

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- **PRESELECTING INVESTMENT MIXES.** While you can think of this feature as a target date fund, these new mixes typically put more investment in fixed income (particularly TIPS—Treasury Inflation Protected Securities) and much less investment in equity, particularly at retirement. The advantages of a preselected investment mix are that individuals participate in a large fund with lower administrative costs, the funds use professional investment advisors, and the funds are designed to meet target benefit goals at retirement (providing greater security to individuals).

- **BUILDING SOME VARIABILITY INTO RETIREMENT INCOME.** For example, if the benefit is defined as a target, the base benefit at retirement may be higher or lower than the target. But more commonly, the income might vary based on investment performance in the fund or changes in future longevity (how long we live). This variability of payment would be small, but building in variability of payment avoids absolute guarantees, which are expensive.

- **CHANGING THE ROLE OF THE EMPLOYER.** Individuals may access benefits through their employers, but their employers might not be the plan sponsor. This allows more small employers to participate, and keeps the cost of running plans low (through economies of scale). It also helps with benefit portability—individuals may be able to stay with the same plan even when they switch employers. In some models, employers are able to offer their own plan, and in some models, employers may have wider choices on the form and level of benefits to be provided.

  If employers are not the plan sponsor, this may also lead to **MORE STANDARDIZATION WITHIN THE SYSTEM.** Some models assume there would be several large retirement plans (for- or not-for-profit) from which individuals or their employers can choose. Other designs assume a uniform benefit structure; individuals and employers then contribute more (or less) to ratchet up (or down) future retirement income. Standardization could help with portability, reduced administration cost and retirement planning.

- There may be a **TWO-LAYER SYSTEM.** In some models, the targeted benefits may only provide a small portion of income in retirement (e.g., 20 percent of final pay for individuals earning up to $60,000 per year at retirement). The goal would be to create ample income, in combination with social insurance, for most middle-income individuals. Individuals could elect to save more in account balance plans like today's 401(k) or Registered Retirement Savings Plan (RRSP), or employers could offer to provide benefits in addition to the basic layer provided by these new systems.

- **THE COST OF THE PLAN WOULD BE BORNE BY EMPLOYERS AND EMPLOYEES.** The exact amount of the contributions, and the exact level of cost sharing, would be determined. Sometimes employer contributions would be encouraged through tax incentives and sometimes equal employer and employee contributions would be mandated, but generally not at a high level (e.g., mandated contributions would only be for the first layer in a two-layer system.)

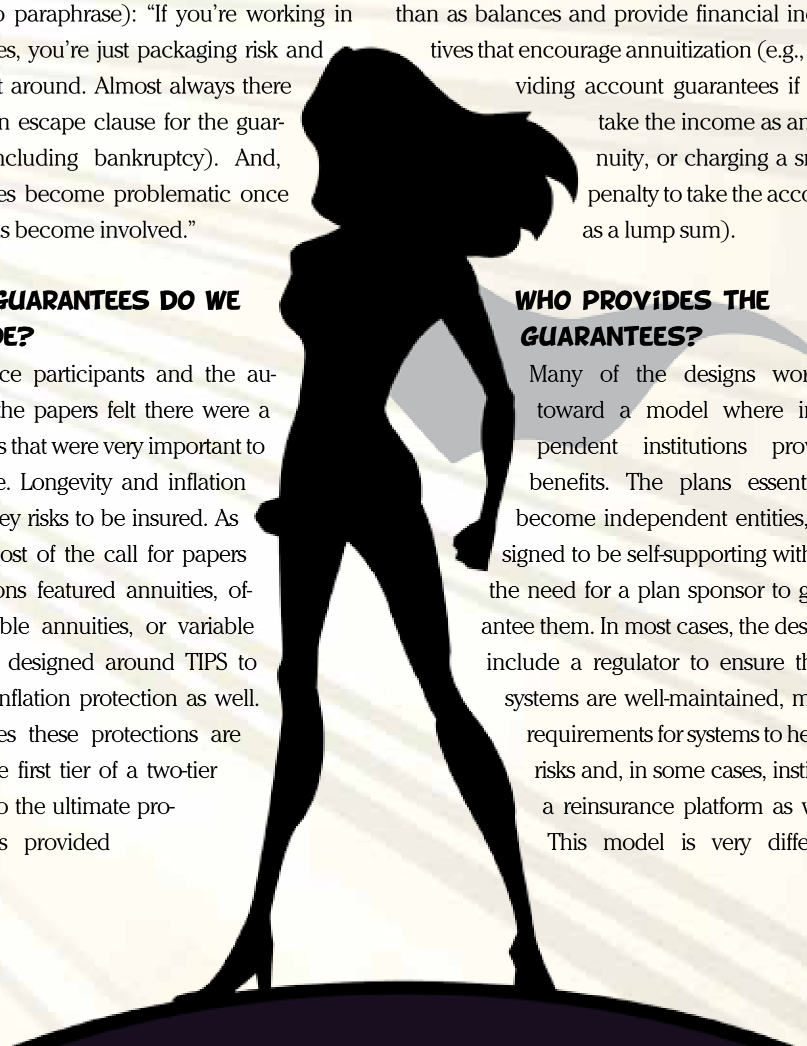
WHAT WE LEARNED FROM THE JUNE CONFERENCE

Joseph Califano, a former U.S. Secretary of Health, Education and Welfare, wrote a book in 1986 about the U.S. health care debate titled *America's Health Care Revolution: Who Lives, Who Dies, Who Pays.* Another version of the title is, "Who lives, who dies, who pays, and who decides." The title, at least for health care, does get at the heart of how the system manages risk and how the system decides whether and how to mitigate that risk. At our recent Retirement 20/20 conference, equally perplexing questions were asked in our opening session by one conference participant: "Do we provide guarantees? What guarantees do we provide? Who provides them? Who guarantees the guarantors?" While the conference itself was structured somewhat differently, those four questions were at the heart of the submissions, and much of the conference discussion.

DO WE PROVIDE GUARANTEES?

Guaranteed income streams are very expensive to provide, particularly in low-interest-rate environments. A key question to answer is: what is the utility of the guarantees to the recipient (the individual) and to society, relative to the additional marginal cost of securing the guarantee? Many of the Retirement 20/20 papers acknowledge the high cost of guarantees, and seek to achieve reasonable certainty of income, without providing a guarantee. For example, several designs consider variable annuity options, or the purchase of a series of deferred life annuities. One design establishes a targeted account value at retirement (that could be converted to an annuity) by establishing plans that track investment performance over time (including making additional contributions after market downturns) and de-risk investment mix significantly as retirement approaches. Another adds a layer of protection with downside protection structured through a shadow account as a form of reinsurance (which is paid through a small charge to the real account).

Conference participants noted that most individuals are used to having some variability in their income, and small variations in income are generally easy to adjust to. Much of the conference discussion focused on how we could better use markets, and structure investments, to provide as much predictability of income as possible, primarily to protect against significant downside. As one conference participant noted (to paraphrase): "If you're working in guarantees, you're just packaging risk and moving it around. Almost always there will be an escape clause for the guarantor (including bankruptcy). And, guarantees become problematic once politicians become involved."



WHAT GUARANTEES DO WE PROVIDE?

Conference participants and the authors of the papers felt there were a few things that were very important to guarantee. Longevity and inflation risk are key risks to be insured. As noted, most of the call for papers submissions featured annuities, often variable annuities, or variable annuities designed around TIPS to provide inflation protection as well. Sometimes these protections are put in the first tier of a two-tier system, so the ultimate protection is provided on a reasonably small dollar annuity (e.g., no more than $10,000 – $15,000 in annual income).

One obstacle that quickly arose in the discussions was how to convince individuals that they should want (or need) annuities. As actuaries, we know that the cost of providing an annuity decreases if you can eliminate anti-selection. That is best done through mandates, but mandates are not popular. More philosophically, as one conference participant noted, "if you have to mandate something because otherwise no one would take it, maybe you should rethink the design."

Many model designers and conference participants hoped that using the best lessons of behavioral finance would be sufficient to ensure individuals are protected against outliving their assets. This could include systems with strong defaults that discuss benefits as income, rather than as balances and provide financial incentives that encourage annuitization (e.g., providing account guarantees if you take the income as an annuity, or charging a small penalty to take the account as a lump sum).

WHO PROVIDES THE GUARANTEES?

Many of the designs worked toward a model where independent institutions provide benefits. The plans essentially become independent entities, designed to be self-supporting without the need for a plan sponsor to guarantee them. In most cases, the designs include a regulator to ensure these systems are well-maintained, make requirements for systems to hedge risks and, in some cases, institute a reinsurance platform as well. This model is very different

WHAT IS RETIREMENT 20/20?

The Society of Actuaries' Pension Section Council has been concerned about changes to the pension system over the past few years. In looking at the issue several years ago, they concluded that they needed, with assistance from others, to step back and look at the bigger picture. Retirement systems today are based on 20th century models, and there have been significant demographic and economic changes that may mean that yesterday's models no longer fit today. Retirement 20/20 is a process to bring together experts on retirement issues to redesign a system from the ground up to meet 21st century retirement fundamentals. One goal the Pension Section has in this process is to develop new retirement risk sharing models that better utilize risk pooling and risk sharing.

The 2006 Retirement 20/20 conference, "Building the Foundation for New Retirement Systems," looked at the needs, risks and roles for the four major system stakeholders (individuals, society, markets and employers). The 2007 conference, "Resolving Stakeholder Tensions: Aligning Roles with Skills," focused on determining and aligning the optimal roles for the various stakeholders. The 2008 conference, "Defining the Characteristics of the 21st Century Retirement System," discussed optimal characteristics for successful retirement systems.Based on the work of these three previous conferences, the SOA issued a call for models in the summer of 2009 to solicit ideas for new Tier II retirement systems that align with the principles of the Retirement 20/20 initiative. The best call for model papers were featured at a June 2010 conference in Washington, D.C., and a conference in fall 2010 (date to be determined) in Toronto, Ontario. A monograph is forthcoming.

To find out more, go to *www.retirement2020.soa.org*. There is also an article in the April/May 2009 issue of *The Actuary* at *www.soa.org/retirement2020/theactuary*.

than the retirement income system in the United States today, where, with few exceptions, plans have a single employer or group of employers as a plan sponsor. These plans sponsors effectively provide a guarantee on benefits, and are responsible, through IRS regulations, for ensuring the plans maintain a minimum funding level.

As such, these proposals assume the employer's role will be limited—and this concept is a bit controversial. In some cases the employer is simply limited to collecting employee contributions and making elective contributions. Other models have some mandatory contributions for employers, or are designed assuming employer/employee cost sharing. Several conference participants noted that most employers would not like being required to make contributions for benefits.

In addition, several conference participants believed the employer's ability to use retirement benefits to attract, retain and retire individuals was important, and that employers had done well in providing these benefits on a voluntary basis under the current system. They noted that today's system was not designed to ensure adequacy of income or widespread coverage, so the fact that not all participants are covered by pension benefits should not be held as a mark of failure for the system. On the other hand, another conference participant noted that influential Washington policymakers were questioning the role of the employer in the system, beyond that of facilitator of payroll deductions.

WHO GUARANTEES THE GUARANTORS?

Most of the proposals did not assume guarantors backing up the guarantees. While a few proposals did have a role for a government-sponsored reinsurer, most assumed these new financial institutions would be self-sustaining.

What does this mean for the new financial institutions? If, as noted earlier, we are going to design retirement income such that an individual may see some variability in his or her payments, but that the payments would be highly predictable, we need strong market hedges. Participants discussed specifically the role of the markets in financial innovation, and noted in particular investment options which could reduce the risk (and particularly the cost) of hedging:

- One author discussed the G-fund, an investment fund available to federal government employees (and retirees) participating in the federal government's Thrift Savings Plan. The G-fund holds nonmarketable U.S. Treasury securities whose rate of return is calculated based on the weighted average yield of all outstanding Treasury notes and bonds with four or more years to maturity. The fund bears no credit (default) risk and provides a rate of return higher than 90-day T-bills.
- Several model designers used TIPS in their designs, in both accumulation and

payout phases. TIPS as an individual investment (beyond a buy and hold strategy) can be problematic because the market price for the TIP security doesn't always move the same way as market prices for non-inflation-linked securities. One participant noted that all you can tell from the price of TIPS is the demand for TIPS—there isn't an economic link between the TIPS price, regular Treasury security price, and inflation expectations. As such, conference participants felt that TIPS needed to be restructured to be usable—much the same way existing Treasury securities are stripped of their coupon payments to make them better financial building blocks. Finally, there was a lively discussion about whether or not TIPS are a good investment because we have not yet seen real returns fall on TIPS the same way they've fallen in other countries issuing inflation-linked securities (e.g., the United Kingdom, where real returns on TIPS have been less than 1 percent).

Policy Challenges in United States to Achieving Retirement 20/20's Promise

One theme of the conference quickly became the difficulty in changing the retirement income system today beyond what some might view as the inevitable shift to a system based on individual defined contribution plans, with little annuitization or risk protection. Many participants cited current U.S. federal budget woes (making it difficult to make any changes to retirement systems that don't generate net savings, or at least no net cost). In addition, in the United States, the 401(k), with a single sum balance, is very popular, and annuities are very unpopular. Finally, individual distrust in institutions, particularly financial institutions, has increased with the recent financial crisis.

Other political difficulties in the United States facing any substantive retirement reform include an inability for the political parties to work toward compromise, particularly post-health care reform and a general perception within Washington that it's more important to focus on savings credits for families (in general) rather than target secured retirement income. One participant cited a 2006 study by the GAO which noted that 3 percent of the baby boomers hold 50 percent of the baby boomer wealth (based on 2004 data from the Survey of Consumer Finance); this study result has made politicians focus on increasing savings rates in general. Several participants argued that, if it was politically effective, the most efficient way of improving retirement income for individuals in the bottom half of the income distribution would be to improve Social Security.

How Should We Respond to These Policy Challenges?

Retirement 20/20's goal has always been to find new ways to generate retirement income for the middle income workers. The 2007 Survey of Consumer Finances defines the 20th income percentile starting at $20,600 and the 80th income percentile starting at $98,200. We recognize that retirement income structures proposed in the Retirement 20/20 call for models cannot address the needs of the poorest citizens, nor are they needed by the wealthiest citizens. We also note that while the large proportion of assets are held by the wealthiest Americans, middle tier households do hold wealth in retirement assets, including pensions (which weren't included in the Survey of Consumer Finances study cited by the GAO). The pension system was never designed to replace Social Security, only to supplement it. What about improving Social Security? Retirement 20/20 has always been concerned with not relying too much on intergenerational transfers of wealth (as occur with Social Security); one lesson realized early on in Retirement 20/20 is that more generous social insurance programs put more intergenerational pressures on taxpayers.

So What Does This Mean for Retirement 20/20?

Clearly we have to work hard to take what we've learned from the models and the conference (and what we'll learn at the Canadian conference) and put that into context with data to show that the existing retirement savings system does add value, and changing the system could increase the value it provides. Many of today's retirees still have defined benefit pensions to supplement their Social Security, so the long-term risk of a system built on individual accounts has not yet been experienced. The recent financial crisis has shown that we don't always understand the risks we take or the implicit assumptions we've made until conditions change. We have much more to do to help build a common understanding of the importance of retirement income.

To find out more about the results of the call for models, and read the prize-winning papers, go to *http://retirement2020.soa.org/new-designs.aspx*. Selected papers will appare in an upcoming monograph. A

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