The Newsletter of the Society of Actuaries

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The Actuary

Will it work?

Investing U.S. Social Security funds in common stocks

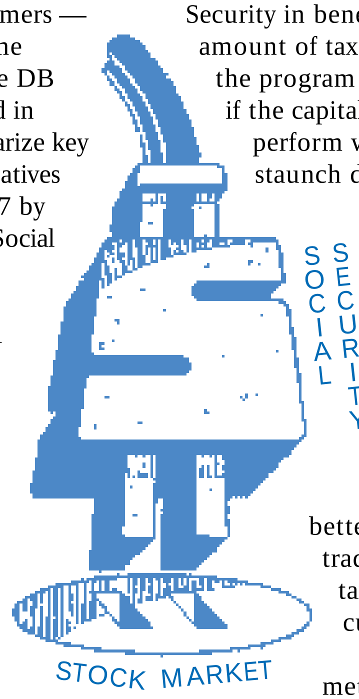
By Dick Schreitmueller

How should the United States reform Social Security benefits for baby boomers and young workers?

1. Adjust their retirement benefits and taxes, and invest part of the Social Security trust funds in the stock market (call this the "defined benefit," or DB, method).
2. Reduce their basic retirement benefits further, and have workers invest part of their future contributions in individual accounts (the "defined contributions," or DC, method).
3. There's no problem. Why reform the system at all?

Fewer and fewer Americans would choose answer 3, as surveys show that the public has a high level of concern about the future of Social Security. For example, a 1997 survey by the Employee Benefit Research Institute showed that only 58% of the American public — and only 44% of those younger than the baby boomers — believe they will receive some Social Security benefits. The DB and DC methods mentioned in points 1 and 2 above summarize key features of the leading alternatives for reform, proposed in 1997 by the government-appointed Social Security Advisory Council and refined in 1998 by the privately sponsored National Commission on Retirement Policy. All these proposals would preserve benefits for older Americans, with the changes affecting only workers below age 55.

Practically every major Social Security proposal today, from all across the political spectrum, would invest some funds in the stock market. Why is this happening? More important, would such proposals work in practice?



Why use stock market investments?

Social Security reform legislation in 1977 and 1983 relied heavily on tax increases and benefit cuts. Today, we could make similar changes, as no Social Security financing problem is too big to fix by revising taxes and benefits — in theory. The trouble is, such an approach would convince even more young workers that they'll never get their money's worth from Social Security in benefits relative to the amount of taxes they'll pay, causing the program to lose public support if the capital markets continue to perform well. Today, even some staunch defenders of the Social Security program no longer argue against investing some of the funds in equities.

The expected higher returns could help restore the program's financial balance and give workers a better deal, though a few traditionalists assert that tax increases and benefit cuts will work again.

The DB and DC methods described earlier represent two very different ways to invest in stocks. The DB method maintains the current defined benefit structure and gradually invests about half the Social Security trust fund assets in equities. The DC approach creates a defined contribution tier — on top of a scaled-back defined benefit structure — in which workers choose how to invest their individual accounts. Depending on the

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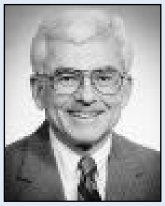

Marc Twinney
Editor responsible for this issue

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The Actuary
Society of Actuaries
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Anna M. Rappaport, FSA, President
Bradley M. Smith, FSA, Director of Publications

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EDITORIAL

Seeking a better return

by Marc Twinney

In the discussions of Social Security reform, much has been made of the money's-worth ratios for individuals with different birth years. Of greater importance in my opinion is the internal rate of return on the aggregate contributions made to the system. This rate is a measure of how the various suggested reforms compete with each other, with other forms of savings, and as an investment in our economy.

If you do the mathematics for an unfunded defined benefit system that is in balance, the system's rate of return boils down to the rate of growth in the aggregate taxable payroll. Adjusting benefits and taxes to achieve long-term actuarial balance in the present pay-as-you-go system decreases the system's rate of return because the benefit yield related to the payroll taxes must decline.

Let us look at the growth in the aggregate payroll in the intermediate projections used for planning. Real wages after inflation are expected to grow by about 1% per year. The average annual rate of change in real wages was 0.9% over the last 40 years. However, the rate for 10-year periods varied considerably, starting at 1.8% in 1957-66 and trending down to 0.5% in 1987-96. Real wages are growing faster than 1% in certain sectors of the economy, but these sectors are slowly shrinking as a proportion of employment.

Aggregate payroll is also affected by the number of wage earners. In the 1960s and '70s, the workforce grew at rates of 2% per year or higher. The growth was driven by the baby boomers and women entering the workforce. With the percentage of females in the workforce at a maximum, fertility rates trending down, and the present policies on immigration, we cannot expect help from a rising number of workers.

While it lasted, the growth in the number of workers and in real wages combined to produce annual growth in payrolls of up to 5%. Even after the initial gain from pay-as-you-go financing had worn off, Social Security was a very good buy. Now, however, future growth and the internal rate of return look to be only 1% per year.

The investment option

The alternative to a pay-go system is to build funds for investment in capital markets. Until now, the effect on the federal budget of investing Social Security funds outside of government bonds was unacceptable politically. Today, many think that investing U.S. Social Security funds is best done by small, vested personal accounts, with investment limitations. This would be preferable to the federal government's investing Social Security trust funds in equities, a policy that, according to Alan Greenspan, would tempt politicians to interfere with companies in which the government was a shareholder.

Achieving the long-term average real rates of returns on bonds and stocks in personal accounts would require a very long-term view and holding that view regardless of short-term market changes. Investing retirement accounts entails the longest horizon that individuals or married couples have, some 40-50 years while working. A further 15-25 years in retirement can be added by variable annuities or life expectancy installments as distribution alternatives; these techniques have been proven in private plans like TIAA-CREF.

Index funds weighted by the market capitalization offer the potential of achieving the average real returns that have been recorded over the last 70 years. Index funds retain the risk and reward of the diversified market as a whole and eliminate the greater risk / reward of investing in a single issue or market segment. They offer a simple way to focus on asset mix where so much of the risk can be managed.

Historic long-term rates serve as the basis of assumed future returns in the following analysis. The long government bond would yield a real rate of 2%. This is lower than the rates expected on the new 30-year inflation-indexed bonds. Corporate bonds would earn a real rate of 2.8% and equities a real rate of 6.5%-7%. Again, this is less than recent experience. In the long term, a balanced portfolio of index funds would earn a real rate of between 4 and 5%. Thus, unlike in many prior periods, the returns on personal accounts would be not only competitive with but superior to the rate of return on the pay-go system.

We are fortunate that there is a way to enlarge the returns for Social Security benefits. Even small accounts, for example based on a 1.6% contribution, under the above assumptions provide 30% of the benefits for lifetime participants.

Analysis of the rate of return requires more than this summary comparison. This analysis, however, is key to the policy decisions on structure. For a review of other investment issues in Social Security reform, see Dick Schreitmueller's article in this issue.

Finding a sensible route

As actuaries we are aware of how difficult it is for our models and assumptions to produce precise futures. Over the long term, a Social Security structure that adds a supplemental tier of modest investment accounts to a major program of defined benefits is preferable to a structure that relies too much on either defined benefits or investment accounts. It does not make any more sense for reform to exclude potentially high-return investment accounts than to abandon defined benefits that target needs.

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specific proposal, mandatory contributions to such individual accounts could range from about 2% to 5% of wages (some 20% to 50% of total Social Security retirement contributions), perhaps supplemented by voluntary contributions, and presumably workers would allocate much of this money to equities.

Investing trust funds in stocks

By law, the U.S. government has always invested trust fund assets for its large retirement programs (Social Security plus plans for military personnel and other federal employees) entirely in U.S. Treasury bonds. Policy makers knew that equity investments could earn a higher long-range return but would involve government interference in private businesses if Uncle Sam selected the securities, voted proxies, etc., based in part on political agendas instead of investment objectives. At best this would reduce investment returns, and at worst damage the economy.

A breakthrough came in 1985-86 when Congress created and enacted the federal employee thrift savings plan (TSP), giving employees the option to invest in common stocks through an index fund administered by a new government agency under tight statutory control. Congress decided not to let employees invest TSP accounts in the open market, as if they were IRAs, because of administrative difficulties and costs. Since its inception in 1987, the TSP stock index fund has been very successful in earning high returns, keeping expenses low, and steering clear of politics. Today, advocates for investing Social Security trust funds in equities point to the TSP as proof that an index fund can avoid the classic dangers of government control. (See my 1988 paper in the *Transactions*, vol. 40, pp. 562-573, for more background on political-social investing, index funds, and operation of the TSP.)

But Social Security is a much bigger program — covering 145 million workers versus some 2 million eligible for the TSP — involving vast sums and reaching into the lives of all Americans. Before enacting Social Security reforms, policy makers need to make a diligent search for basic weaknesses and ask whether any fundamental flaw is fixable or fatal. Although I was present at the creation of the TSP index fund and am one of its biggest fans, I believe investing Social Security trust funds in an index fund raises questions that are troubling or unresolved.

Political temptation: Even with the best of intentions at the outset, can politicians resist the temptation to use the growing funds for political or social objectives? Under our current Constitution, Congress cannot be prevented from writing new laws that override an index fund's statutory controls. (The Canada Pension Plan's newly enacted reforms imply optimism about such issues, relying on fiduciary standards plus some indexing to make a politically appointed board manage equity funds at arm's length.)

Proxy voting: Is it feasible for Social Security to follow the TSP practice of delegating proxy voting to an outside fund manager who serves participants as a fiduciary? What are the dangers of concentrating so much government control over specific companies in one place? Is it better for nobody to exercise voting power with respect to stocks held centrally by Social Security?

Impact of the index: Mindful that including a given stock in the Social Security index fund will boost the price of that stock, how can Uncle Sam define the index to minimize market distortions or abuses? Could index funds held by Social Security and others become so dominant that stock prices no longer

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Will it work? (continued from page 3)

reflect business reality or provide incentive for management to perform?

Risk and volatility: How would Social Security policy makers and the public react to unexpected gains or losses in equities? Is a politician's short-term horizon compatible with long-term investment success?

Baby boomers' withdrawals: As retired baby boomers draw down their savings to cover living costs, tending to depress the stock market, would a shrinking Social Security stock fund make matters worse by selling stocks at the same time?

Finally, why go to all this trouble? If the Social Security funds buy stocks, the government must sell more of its bonds to outside investors — a zero-sum game with no appreciable effect on national savings, at least in the short term. This tends to raise both the investment return that Social Security earns on its trust funds and the interest that Treasury pays on its bonds. Thus, some people consider the current arrangement a subsidy of Treasury by Social Security taxpayers. Would it make more sense for the Treasury Department just to repay such a subsidy directly to Social Security without going through the stock market, such as by paying higher interest rates on the special bonds that Treasury sells to the trust funds?

Investing contributions in individual accounts

The defined contribution (DC) alternative would let workers decide how their accounts are invested, avoiding most or all problems with government control of the economy as discussed above, but creating an enormous number of small transactions that need accurate, efficient handling. The DC proposals entail administrative challenges that go well beyond the existing Social Security program, combining the universal scope of Social Security with the complex record keeping of a 401(k) plan — and administration of these simpler programs is hardly free from error. If the DC system is to have any chance of working, its design must emphasize the "KISS" principle ("keep it simple, stupid"), cutting out frills and limiting choices. After the DC launch got off the ground, we would have plenty of time to add new features — just as we did with the original Social Security program.

Under the DC approach, a critical issue is whether to let workers choose among many investment alternatives available on the open market (the IRA model) or among a few investment funds designed specifically for Social Security (the "KISS" model). The TSP uses the latter method because it simplifies administration, holds down costs, and avoids confusing employees; these would also be major advantages for Social Security. Moreover, the British are reporting bad experience with their version of the IRA model for personal Social Security accounts, as aggressive sales practices have led workers to make poor choices.

Allowing voluntary contributions is not a good idea if it requires offering loans or withdrawals — features that are complex to administer and may dilute retirement savings. Requiring the purchase of CPI-indexed annuities at retirement makes sense, at least up to a level that covers basic retirement living expenses, provided the annuities are attractively priced and have no risk of insurer insolvency. The potential market for such annuities warrants creative design efforts by the government and the insurance industry.

Benefit experts must speak

Many organizations advocate the DC approach to Social Security reform, recognizing that the private sector may play roles in investment management, communications, record keeping, and annuity underwriting, perhaps using syndicates or alliances. Large employers may want the option to administer their own DC plans as an alternative to the DC tier of Social Security. Although some find the DC approach impractical and risky, the DB approach presents bigger problems. We need to move steadily toward a consensus, avoiding misguided design efforts that incite fervent opposition, such as the "Harry and Louise" ads that helped bury the Clinton health care plan. Benefit experts in the private sector should express their views and work closely with lawmakers to reform Social Security in ways that will stand the test of time.

Richard G. Schreitmueller is a consulting actuary in Kensington, Md. He can be reached at *dschreit@erols.com*.

Share your views on U.S. Social Security reform

In the U.S. Congress, public forums, and the pages of the news media, many actuaries have offered ideas on how the U.S. Social Security system should be reformed. Now, *The Actuary* asks for your views on some of these ideas in a special survey.

A form accompanying this month's issue asks SOA members and students to "vote" for their preference on a few of the most discussed reform topics. The form also asks for some demographic information so that results can be correlated across categories.

Completed forms should arrive in the SOA office by Oct. 30. They should be sent by fax or regular mail (not e-mail) to: Social Security Survey, *The Actuary*, Society of Actuaries, 475 N. Martingale Road, Suite 800, Schaumburg, IL 60173, fax 847/706-3599. Results will be announced in a future issue of *The Actuary*.

A glaring error

Why one study of Social Security misstates returns

by Robert J. Myers

By definition, actuaries are preeminent in making actuarial analyses. Nevertheless, in some areas, such analyses can be adequately performed by persons from other professions, such as economists and statisticians. The danger exists, however, that the nonactuary may, unknowingly, make serious errors in methodology through improper oversimplification. A glaring example of this is a recent report from The Heritage Foundation, a conservative Washington think tank (“Social Security’s Rate of Return,” by William W. Beach, senior fellow in economics, and Gareth G. Davis, research assistant, Jan. 15, 1998).

Heritage study’s conclusions

The conclusions of the Heritage Foundation study are well summarized in the following quotation from it:

> Low-income, single African-American males born after 1959 face a negative rate of return from Social Security (-0.66% for 1970 births). For every dollar he has paid into Social Security, a low-income, single African-American male in his mid-20s who earned about 50% of the average wage, or $12,862, in 1996 can expect to get back less than 88 cents.

These results have been widely disseminated through the news media and Web sites. For example, *The Wall Street Journal,* in its Jan. 12 issue, stated, “Most surprising are low rates of return for African-Americans. As a group, single black men born in the 1960s face negative rates of return from Social Security, regardless of income.” *The Journal* repeated this conclusion in an editorial on April 13. The reason that the results were so surprising is that they were grossly in error due to faulty methodology.

Study’s methodology

The Heritage study projected the year-by-year amounts of (1) the combined employer-employee payroll taxes (contributions) after first taking out the insurance cost for preretirement survivor and disability benefits and (2) the retirement benefits payable after reaching the normal (or full-benefits) retirement age. Then, an interest rate was determined that makes the present values of the two streams of amounts be equal. Adjustments were made for inflation and, quite properly and objectively, for the spread between African-Americans’ and Caucasians’ mortality eventually being eliminated.

The fatal flaw occurred in making projections based on averages — i.e., that all members of the group live exactly to their average life expectancy and then drop dead— rather than properly basing projections on the distribution by single years of the group members’ ages at death.

Specifically as to African-American males, the Heritage study assumed that all currently aged 21 would live exactly to age 69 (i.e., a life expectancy of 48 years after age 21). The result would be that all members of such a group would pay contributions for 46 years, before retiring at age 67, and would receive retirement benefits for two years. A similar procedure was followed for the other race and sex groups, in all cases producing erroneous results, although not as much so as for this group. The following discussion concentrates on that group, but the criticism applies to some extent for all groups.

Error in methodology

That the foregoing result for young African-American males is unrealistic and erroneous can readily be seen from two facts. First, about 40% of the group would die before age 67 and thus pay less than 46 years of contributions. Second, the 60% of the group who survive to age 67 will live for anywhere from a few months to as much as 30 years (averaging perhaps 12 years). Thus, the taxes are overstated and the benefits are understated.

That the Heritage methodology is erroneous can be seen even more clearly if slightly different conditions are assumed. Suppose that the life expectancy at age 21 for this group was 46 years instead of 48 years, a not unreasonable situation. Then, the result would be that the entire group would be shown as making 46 years of contributions and receiving no retirement benefits whatsoever, for a rate of return of -100%. Because, in fact, about 50% of the group would die before age 67 and pay contributions for less than 46 years, and the other 50% would live to age 67 and then an average of about 12 years thereafter, the foregoing results are obviously grossly in error.

If the computations for young African-Americans had been made correctly, it is certain that a positive rate of return would have been shown. This is because of the weighted benefit formula (which provides higher relative benefits to low-earning workers), which more than offsets their lower longevity. Let the Heritage researchers run their model again — this time using correct methodology that makes projections by single years of age rather than averages.

A crucial lesson

Persons who have not had actuarial training should be very careful when using life expectancy data. In particular, analyses should not be made on the basis that all persons of a given age will live for a number of years exactly equal to their life expectancy at that age and then die. Significant errors can result thereby. The old story about misuse of averages is still true: the non-swimmer who wades into a lake with an average depth of two feet will certainly drown if venturing into the part that is seven feet deep.

Robert J. Myers was chief actuary of the U.S. Social Security Administration, 1947-70, and deputy commissioner of Social Security, 1981-82.

Difficult questions

SAVER summit looks at retirement needs and savings plans

by Anna M. Rappaport
1997-98 SOA President

I had the privilege to serve as a delegate to the National Summit on Retirement Savings on June 4-5 in Washington, D.C. During my year as SOA president, I have chosen to focus attention on challenges related to an aging society. The summit was a U.S. effort aimed in that direction.

A number of actuaries were among the summit's 200 delegates. At times we have been concerned that issues in actuaries' areas of expertise did not have actuarial input, but we were well represented at this event.

The summit focused on the implications of low savings rates on the aging of America and was designed to help policy makers and all Americans think about ways to increase retirement savings. During the opening session, Congressional and administration leaders joined in showing strong support for savings. President Bill Clinton showed his support by hosting a White House reception for the summit participants. This congressional and administration support for the summit was very exciting.

Alexis Herman, U.S. Secretary of Labor, hosted the summit for the administration. She expressed particular concern about retirement resources in light of the needs of women and minorities. Small business also was targeted, because very few small employers now sponsor retirement plans while the vast majority of large companies do. This is especially problematic since total employment is shifting away from large companies to small ones.

The summit was organized in accordance with the federal SAVER legislation. (The SAVER Act — "Savings are Vital to Everyone's Retirement" — became law in November 1997 to encourage retirement savings through the impetus of public-private sector partnerships.) It was an opportunity to draw public attention, through coverage by the news media, to the need for more retirement savings. It was also an opportunity to get people with very

different perspectives to provide input on the issues surrounding low savings rates. The input was recorded, but how it will be used remains to be seen. Two hopeful signs: the American Savings Education Council is preparing a report for Congress, and the congressional leaders most involved with pension legislation participated in the summit.

The delegates represented many different groups, and as such are in a position to influence action in the private sector and to provide input to the public sector. They had very different opinions. Background material came from a briefing book distributed to all delegates and from the opening speeches. Some groups, including the American Academy of Actuaries, also distributed material to the delegates. Breakout sessions then searched for ideas and opportunities to help increase retirement savings. There was much informal discussion in the hallways and during coffee breaks. This article is based on my perceptions; it is not a formal summary of the meeting, although one is expected to be forthcoming.

Problems discussed included:

- The low overall savings rate at present, relative to what is needed, compared to historical levels and to savings in other countries
- The leakage of retirement funds as lump-sum payments are used for purposes other than retirement
- The low rate of retirement plan sponsorship by small businesses
- Where voluntary plans are offered, the low participation rate of individuals earning less than $50,000
- The difference in economic status among groups of the elderly, with women and minorities being considerably less well off than other groups

Some presentations highlighted the historical role of unions in helping to secure pension coverage. The experiences of unions offer useful information for other large organizations, such as major corporations. James Ray, partner in the Washington, D.C., law firm of Connerton & Ray and a specialist on joint labor-management multiemployer plans, focused on defined benefit plans and how they do a much better job than defined contribution plans in providing regular retirement income. Ann Combs, principal, William M. Mercer Incorporated, focused on women and minorities and the link between earnings, labor force participation, and benefit levels. She also pointed out that women are more likely to be employed by small businesses, which have a much lower rate of plan sponsorship.

I have been personally very interested in the issues related to women and had the privilege of serving on a study group on women's retirement issues convened by the House Committee on Aging in 1992. Several study group members were delegates to the summit. For me, it is sad to report that the issues we focused on in 1992 are no different today, and some conditions have worsened.

The summit offered an opportunity for many from the private sector to express their views on regulations and the accompanying challenges. For large employers, the regulations are a hurdle and somewhat costly, but they do not stop companies from offering retirement plans. More than 80% of employers with over 1,000 employees sponsor plans. In contrast, fewer than 15% of the smallest companies sponsor plans; the regulations are a critical hurdle, particularly for defined benefit plans. Members of Congress committed to retirement savings are working to reduce some of the regulatory barriers. While regulation and taxes explain part of the low participation, the economic challenges facing small business are also important. New businesses have a high rate of failure, and nothing done for pensions will change that. Easier access to IRAs was seen as a way to compensate.

Discussions on lump sum distributions showed much disagreement. There is concern about leakage, but at the same time, many feel that people should have the right to use their money any way they want. There is disagreement about whether or not using money to buy a house will support stronger retirement assets. This issue also was discussed by the 1992 study group.

Another contentious issue was one related to the plight of lower-income individuals. Some delegates felt that it was unrealistic for people with incomes below a certain amount to save, whereas others felt that education, incentives, or both would work. It was clear that ideas about an appropriate social safety net, while not discussed in the sessions, were radically different. Those whose primary concern was adequate retirement resources for minorities, women, and lower-income persons see the safety net as absolutely vital.

We saw some exciting examples of good communication about savings programs, but we also heard some warnings from the audience — specifically, that we need to be careful not to use too-high rates of return in our calculations and, thereby, over-promise wealth through saving. I also saw some disconnects in the discussion about communication: An employer example presented was closely tailored to the culture of the company, while the discussion focused on generic, widely available material; the employer clearly stated that success was tied to communicating for the culture of the company.

Did the summit line up well with my view on these issues? My answer has to be "yes" in some areas, but "no" in others. I think savings education is very important and that people must save more. Policy changes to incent more savings also may help us meet objectives. Here, we must be clear about our objectives. If our objective is to raise the aggregate of national savings, incentives could do that, but the most promising changes may be targeted at the higher-income 50% of the population. If our objective is to improve well-being in retirement, particularly for those not served well by the system today, we need to look to very different changes. Our first goal must be to improve the wages and labor force participation of that part of the population and then to focus on incentives that will encourage more benefits and savings for that group. Raising limits on tax deferrals addresses the first objective but not the second. We must not pretend that savings education, tax incentives, or both will remove all the challenges to retirement security. The safety net is very important.

There was some focus on defined benefit plans in the opening discussion, but not much in the breakout group I attended. These plans deserve more discussion because they offer a way to provide a base layer of benefits for employees with long service. (Of course, one key question is whether many people will reach long service with a single employer.) There was some focus on multi-employer plans, and certainly this is a concept to consider when exploring ways to offer security to people who stay in a profession but change employers. TIAA-CREF was suggested as a model.

Anna Rappaport spoke with several national leaders at the SAVER summit concerned with meeting U. S. citizens' retirement needs. She is shown here with Rep. Earl Pomeroy (D-N.D.).

Several members of Congress focused on their attempts at regulatory and legislative change. There is certainly support, in at least some quarters, for positive change in pension law.

The summit was a personally interesting experience, and I was proud to be part of it. Delegates have gone home with the impressions of the summit, and there are many pension policy proposals being considered in Washington. I hope that when the next SAVER summit is held two years from now, we can say that the 1998 summit accomplished good results.

Anna Rappaport is principal, William M. Mercer Incorporated, Chicago. She can be reached by e-mail at *anna_rappaport@mercer.com*.

Cultural exchange

SOA reports, gains information at international congress

by Anna M. Rappaport
1997-98 SOA President

Every time I attend a meeting like the recent International Congress of Actuaries (ICA), it reinforces for me the value of exchanging ideas with actuaries from a variety of cultures. This ICA, held June 7-11 in Birmingham, England, emphasized that actuaries in many countries face similar challenges in dealing with their customers and the users of their services and in seeking to maintain the profession in their own countries.

This was an extremely important meeting, held as the actuarial profession moves to a more globalized world. During the meeting, the International Actuarial Association (IAA) was restructured as an organization of actuarial organizations (rather than individual actuaries). This will allow the IAA to better serve the needs of a global profession. (See "Going global," *The Actuary*, June 1998). This change becomes more important as trade agreements blur national trade boundaries and as the regulation of accounting is increasingly a matter for the International Accounting Standards Committee, a global standards-setting body.

The SOA shines and learns

The congress was mind-expanding and fun as well, with many high points of interest to SOA members. Our organization offered much information and many views to other countries, and I believe SOA members at the ICA learned a great deal as well.

I presented the results of the SOA's study of social security mortality projection methods at the general session on Monday afternoon. (See "A gathering of scientists," *The Actuary*, March 1998, and "Social security 'summit'," January 1998.)

Actuarial science may be first profession to truly globalize

by William F. Bluhm
Vice President, International Affairs

The International Actuarial Association (IAA), representing the actuarial profession worldwide, announced in June that it has taken the first steps toward setting up uniform standards of education and professionalism. This creation of a single international organization to represent actuaries in every major nation where actuaries are organized may make the actuarial profession the first "fully global profession."

IAA members voted to convert the IAA into an association of associations during the IAA's 26th International Congress of Actuaries, June 7-12, in Birmingham, England (see "Going global," *The Actuary*, June 1998). To obtain full-member status, which allows an association to vote on IAA measures, the association must have in place a code of professional conduct and a disciplinary process complying with an international standard. As of press time, 39 organizations, including the SOA, were full members of the IAA. (Other categories include associate, actuarial organizations pledging to meet full-member requirements within three years; observer, actuarial associations which do not meet the criteria for full or associate members; and institutional, international nonactuarial organizations.)

The current IAA president is Jean Berthon, 1996-97 president of the French Institute of Actuaries. He will serve until the end of 1999. The president-elect is Catherine Prime, 1991 president of the Institute of Actuaries of Australia.

All SOA Fellows will automatically become members of the IAA. Associates can continue their IAA membership subject to payment of dues. More information on Associate membership is expected by the end of the year.

The IAA currently has 11 committees dealing with a variety of topics. Nine committees have a total of 109 members, and two are just beginning to recruit. Seven SOA members currently serve on six committees:

- Robert L. Collett, SOA IAA delegate and vice chair of the Advice and Assistance Committee
- Cecil Bykerk, vice chair, Education Committee
- Sam Gutterman, chair, and Richard S. Robertson, IASC Insurance Accounting Standards Committee
- Robert Wilcox, Insurance Regulation Committee
- Walter S. Rugland, chair, Nominations Committee
- Michael Sze, Social Security Committee

The SOA Board of Governors is considering SOA representation for the five remaining committees (addressing issues related to accreditation, audits, the IASC employee benefits accounting standard, member services, and public statements).

Information and updates on IAA activities are available on the organization's Web site (*www.actuaries.org*).

Throughout the week, many told me they found the study interesting.

A session on actuarial education around the world offered insights into key problems in other countries. I was pleased to be able to discuss how the SOA is addressing the changing world in our new syllabus and educational programs. The Institute of Actuaries is restructuring its examinations at the same time we are and addressing many of the same issues.

Actuaries in many countries are concerned about the frail elderly. Public and private programs in different countries are addressing these issues in a variety of ways. In Israel, some disability products include long-term care coverage. In the United Kingdom, as in the United States, continuing care retirement communities are available.

Parallel sessions provided actuaries a chance to discuss current concerns with regard to health care, pensions, life insurance, casualty insurance, finance and investments, and social security with their counterparts. Papers submitted to the congress introduced the topics, but the discussion was far-ranging, and guest lectures added different perspectives.

Several sessions explored the history of the actuarial profession in many countries. In the Netherlands and Scandinavia, the profession has existed for more than 200 years. In contrast, it is just in the last few years that the profession has been established (or re-established) in many Eastern European countries. Also, this is a time of anniversaries; the Institute of Actuaries of Japan will mark its 100th anniversary next year, and the South African society is celebrating its 50th this year.

The Institute's 150th year

The anniversary that drew the most attention, however, was the 150th anniversary of the United Kingdom's Institute of Actuaries. While the ICA has an international orientation, the congress offered a welcome opportunity to recognize the important contributions of this domestic actuarial organization. For the anniversary, the Institute sponsored a dramatic and inspiring exhibit, a review of their history, and a scientific program featuring more than 150 papers. In response to the question "So What Is an Actuary?" the exhibit catalog states:

> There are fewer than 35,000 actuaries worldwide. Collectively they are guardians of the financial interests of many millions of people. They assess and monitor the likely financial impact of tomorrow's uncertain events so that businesses and individuals alike can safeguard their future, confidently and at a fair price, in an ever-changing and unpredictable world. Actuaries design solutions to problems that involve financial risk or future uncertainty.

Many reasons to attend

We also had the opportunity to get some insight on Birmingham, a revitalized industrial center with more miles of canals than Venice. In fact, the convention center where the ICA was held was right on a canal — a great place to walk when we could find a spare minute. The conference "day out" offered us a chance to see a medieval fair on the grounds of a country estate. The jousting exhibition was a very different, fascinating demonstration.

If you missed Birmingham, you have another chance — closer to home. The next ICA will be held in Cancun, Mexico, in March 2002. Congresses are a great experience, offering a unique type of learning. U.S. actuaries constituted about 5% of the total group in Birmingham. Our colleagues from other lands offered a chance to get a better understanding and perspective about our profession and the issues we face. I believe that in our global economy, all actuaries should attend at least one congress during their careers.

Anna Rappaport is principal, William M. Mercer Incorporated, Chicago. She can be reached by e-mail at *anna_rappaport@mercer.com*.

Exam prep seminar news

Course 210 sessions set for Sept., Oct.

Waterloo Actuarial Seminars will sponsor SOA exam study courses in three U.S. locations this September and October.

Keith Sharp, associate professor, University of Waterloo, will offer seminars in Course 210 in Hartford, Sept. 14-21; Somerset, N.J., Sept. 27-29; and Chicago, Oct. 19-25. For details, contact Sharp at 519/743-2863, or check the seminar Web site (*SharpWaterloo@compuserve.com*).

EA-2 workshop planned

A three-and-a-half-day problem-solving workshop for the EA-2 exam will be held Oct. 29-Nov. 1 in New York City by Actuarial Study Materials (A.S.M.). Details are available in the SOA study notes package or from Harold Cherry of A.S.M. (phone: 516/868-2924).

A.S.M. also offers textbooks and study materials for SOA exams. Further information is available in the study notes package or from A.S.M. (toll-free phone: 888/275-4276; fax: 516/868-6595; Web site: *www.webcentre.com/asm/*).

Daniel opens Web site for Course 150 exam

James W. Daniel, director of actuarial studies at the University of Texas, has created a Web site for his Course 150 exam seminar. The Web address is *http://lonestar.texas.net/~adaniel/sem/austin_actuarial_seminars.html*. More information is available directly from Dr. Daniel (phone: 512/471-7168; fax: 512/471-9038; e-mail: *jimdaniel@mail.utexas.edu*).

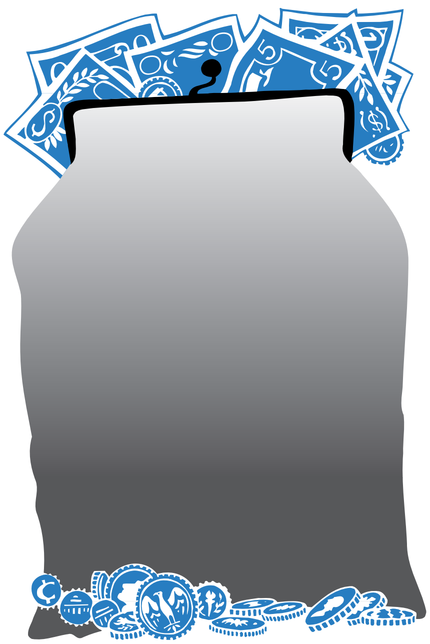
Actuarial salaries

Where do you go for the truth about dough?

by Linda Heacox
SOA Public Relations Specialist

From entry- to Fellowship-level, actuaries at all stages of their careers want to know about money. Who is making how much? Where are they making it? And, how does my salary compare? Actuaries who speak regularly before high school or college groups say it's not that easy to answer the most frequently asked question, "How much will I make as an actuary?"

Recruiters and employers want the same information. Yet, despite a number of actuarial professional groups and associations, publicly available salary surveys tend to be rare. Nor do most of the professional associations have plans to survey their memberships for the information.



The data challenge

The SOA has not attempted a survey of actuarial income in about 12 years. The original survey of members yielded fairly inconsistent data, said Pat Holmberg, candidate ombudsperson. As the data was not reliable enough, the SOA discontinued the effort.

Drake University actuarial science professor Stuart Klugman, FSA, and SOA board member, also found barriers to collecting data when he compiled his survey of entry-level salaries under the auspices of his university. The companies he and his staff polled were reluctant to release their salary information to survey takers and therefore to competitors. The same was true when he surveyed other professors to obtain data on recently placed graduates. Drake ended its actuarial salary survey with the 1996 edition.

The American Academy of Actuaries has no plans to do a new survey at this time. Their most recent one was in 1996.

The Casualty Actuarial Society has not done an official salary survey of its members, though the CAS manager of admissions, Tom Downey, reported that students developed an informal survey in the students' discussion forum on the CAS Web site (go to *www.casact.org* and click on *Students' Corner*). The discussion includes information on the students' geographic location, number of exams, and type of employment. Downey cautions, however, that the survey is unscientific.

The Canadian Institute of Actuaries does a survey about every three years but limits distribution to its own members. Its last such survey was in 1996.

Salary surveys for a fee or free

Those willing to pay for actuarial salary information might look to a survey by the Life Office Management Association (LOMA). The Atlanta-based group produces yearly salary surveys based on data collected from human resource departments. The survey, called the *U.S. Managerial and Professional/Technical Compensation Survey*, includes actuarial job data and actuarial student data, including breakdown of salary information by credits and information on bonuses for passing exams. LOMA charges its members $525 for the survey and nonmembers $925. To order, call the LOMA Human Resources Services Department (phone: 770 / 984-3775).

Salary information also is available without charge:

- D.W. Simpson and Company, a Chicago actuarial recruiter, does a salary survey that is regularly updated and posted on its Web site in table format (*www.dwsimpson.com*). Data is broken down by property casualty vs. life / health / pension, years of experience, exams / credits, and attainment of the ASA and FSA.
- Actuarial science is also included in the U.S. Bureau of Labor Statistics survey of 700-plus careers in a variety of industries. It is called the Occupational Employment Statistics Survey and can be found through the bureau's home page (*www.stats.bls.gov/oeshome.htm*).
- Informal information on salaries is available online at the SOA Web site. Students are anonymously posting their salary information, along with their geographic areas, years of experience, practice areas, and exams / credits. At *www.soa.org*, click on *Discussion Forums*. Under *General Interest*, click on *New Actuarial Salary Survey.*

SOA gift contributes to Staple Inn's history

by Morris W. Chambers

On a 1992 visit to the Institute of Actuaries' home, Staple Inn, two SOA members formed an idea that grew into a historic reality.

In late November that year, Morris Chambers and Walter S. Rugland, then presidents of the Canadian Institute of Actuaries and the SOA respectively, were attending meetings at Staple Inn with the leaders of the Institute and Faculty of Actuaries. They were both greatly impressed with the Staple Inn hall and particularly with its historic windows, but noted that a few panes contained only plain glass.

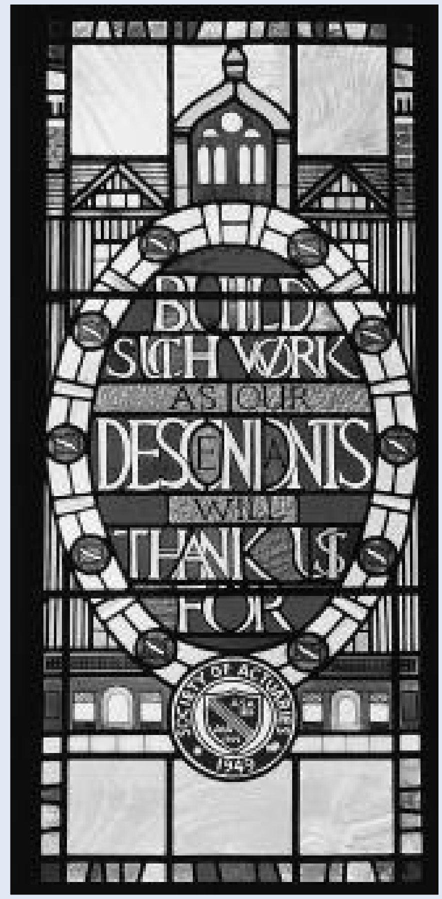
Here was an opportunity to contribute a very special gift to the Institute, and with its 150th anniversary six years away, Chambers and Rugland knew there was time to advance their idea: stained glass windows from actuarial organizations "across the pond."

Chambers and Rugland championed the idea to the SOA, the CIA, and the American Academy of Actuaries. The result was three windows, all designed by the same artist, Ted Goodden, for consistency, and presented during the Institute's 150th anniversary celebration. Howard Bolnick, 1997-98 SOA president-elect, represented the SOA at the event, held June 4 at Staple Inn. Leaders of the actuarial profession from around the world gathered at the event to recognize this important sesquicentennial just a few days prior to the International Congress of Actuaries, June 7-12, Birmingham, England.

Staple Inn has been the home of the Institute of Actuaries almost continually since 1887. It is located in High Holborn, on the south side, close by the Chancery Lane tube station. The facade is a striking 16th-century Tudor building.

One of the glories of Staple Inn is its stained glass. One evening in August 1944, a flying bomb fell in the garden just behind the hall and left the hall in ruins. Fortunately, during the blitz, the glass of the hall had been removed to storage in a safe place. For eleven years, the Institute of Actuaries lacked a home while the hall was rebuilt as nearly as possible to the original design. In 1955, with the glass refitted in its proper place, the Institute returned to Staple Inn.

SOA members who find themselves in London are encouraged to undertake the pilgrimage to Staple Inn, to admire the stained glass in Staple Inn Hall, and particularly to take note of the three actuarial organizations' anniversary gifts. The Institute of Actuaries has extended its welcome, and the Institute staff, unless hard-pressed by other matters, will be most accommodating.



The SOA window displays a quotation by John Ruskin, author of the quotation that serves as the SOA motto, "The work of science is to substitute facts for appearances and demonstrations for impressions."

SOA/CAS minority recruiting program donations

A story in the April 1998 issue of *The Actuary* listed an incorrect post office box number for donations to the actuarial minority recruiting program cosponsored by the SOA and the Casualty Actuarial Society. Donations help support scholarship awards and summer educational programs.

Checks should be made payable to the CAS/SOA Minority Recruiting Program and mailed to P.O. Box 95668, Chicago, IL 60694. Further information on the program is available from Susan Martz at the SOA office (phone: 847/706-3543; fax: 847/706-3599; e-mail: *smartz@soa.org*).

Miss the '97 ARC? Get an overview via CD-ROM

by Arnold Shapiro
and Edward B. Kleinman

Recipients of *Actuarial Research Clearinghouse* (ARCH) 1998.1 will find the third in a series of interactive CD-ROM modules, titled "What's New in Actuarial Education and Research," in a sleeve inside the back cover. The module's focus is the highlights of the 32nd Actuarial Research Conference (ARC), held at the University of Calgary in August 1997.

As with the earlier modules, the two goals of this module are:

- To help the user get a better understanding of what's new in actuarial education and research in the United States and Canada
- To help the user become better acquainted with the educators and researchers involved

Figure 2

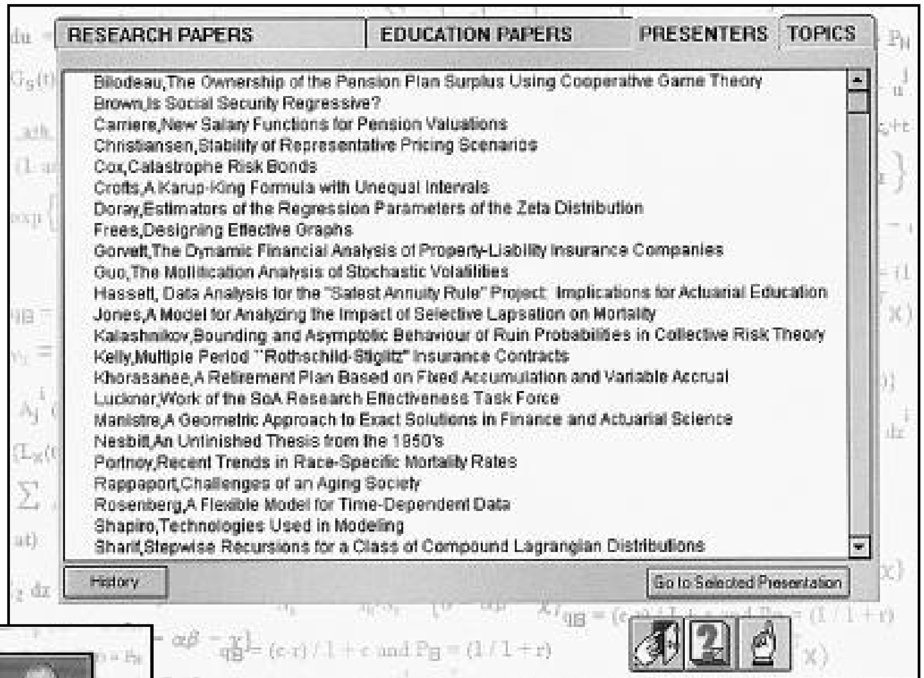
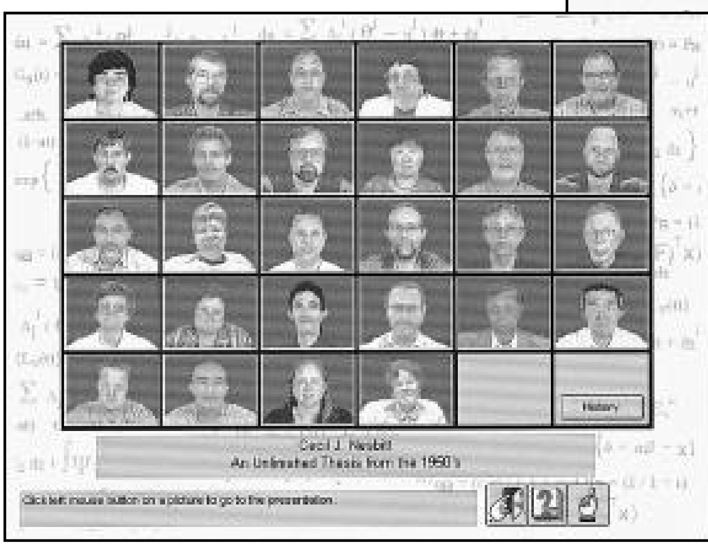


Figure 1



The CD-ROM project was supported in part by the William Elliott Chair of Insurance at Pennsylvania State University.

Format of the module

The highlights of each presentation were videotaped and then digitized and recorded on a CD-ROM. This disk was then used to develop a computer-based, user-friendly, multimedia summary of the highlights of ARC.

Since the emphasis was on easy access, there are two ways to access the highlights of each presentation. The first, shown in Figure 1, provides access to the talks by clicking the computer mouse on a presenter's image. Passing the mouse over the image displays the presenter's name and the presentation's title. This is a fast way to access a presentation when users recognize one of ARC's 28 presenters.

The second access method is through one of the indexes shown in Figure 2. As indicated at the top of the screen, the presentations are indexed by research papers, education papers, presenters, and topics. The general topics covered by the researchers included insurance, modeling, retirement issues, statistics, and the work of the Society's Research Effectiveness Task Force. The educators addressed such topics as graduation and actuarial approximations.

Equipment

The equipment needed to run the CD-ROM is readily available: Windows 3.1 (or better); an IBM PC or compatible (Pentium 100 MHZ or better); CD-ROM player (2X or better); super VGA monitor; and a sound card (SoundBlaster Pro or compatible).

Arnold Shapiro is professor of actuarial science and insurance and director of the Risk Management Research Center, Smeal College of Business, Pennsylvania State University. Edward Kleinman holds a doctorate in instructional design and also is affiliated with Smeal. Shapiro can be reached by e-mail at *afs1@psu.edu*.

Credit-winning paper focuses on private retirement programs

by Donald A. Jones

The Education and Examination Research Paper Committee recently awarded 30 Fellowship credits to Krzysztof M. Ostaszewski, Ph.D., ASA, for his paper, "Macroeconomic Aspects of Private Retirement Programs."

This is the twelfth such paper approved for Fellowship credit under the SOA's Future Education Methods program. Dr. Ostaszewski is actuarial program director, Department of Mathematics, University of Louisville.

The paper analyzes possible macroeconomic factors contributing to the decline in the use of defined benefit plans and proposes an alternative hypothesis for the cause of the decline. Considered a crisis, the decline has been attributed to cost of government regulation, societal and cultural changes, changed attitudes of employers, employees' lack of understanding of defined benefit plans, and other factors. The work proposes that a shift in the way relative returns to macroeconomic factors of production — i.e., capital and labor — are allocated in the national economy is a possible cause for the decline of defined benefit plans in the United States.

The committee would like to thank Phelim Boyle, C.V. Schaller-Kelly, James C. Hickman, and Robert L. Brown, who refereed this paper, and acknowledge Shane A. Chalke, who served as Dr. Ostaszewski's supervisor.

Copies of the paper are available from Ellen Bull, SOA librarian (phone: 847 / 706-3575; fax: 847 / 706-3599; e-mail: *ebull@soa.org*). Students interested in the research paper program should consult Appendix II, "Credits for Research Papers," of the current *Associateship and Fellowship Catalog.* Applications for the program are available from Cherie Harrold at the SOA office (phone: 847 / 706-3598; fax: 847 / 706-3599; e-mail: *charrold@soa.org*).

Donald A. Jones is a professor of mathematics, Oregon State University, Corvallis, Ore. He can be reached by e-mail at *donjones@math.orst.edu*.

SOA members invited to October board meeting

Interested Society members are welcome to attend the SOA Board of Governors meeting Oct. 17 in New York at the Marriott Marquis Hotel in conjunction with the annual meeting. For more information, call the SOA office at 847 / 706-3500.

Minutes of board meetings are available by request and on the SOA Web site (under *General Libraries* at *www.soa.org*).

Upcoming SOA meetings and seminars

Oct. 15-16	Advanced GAAP	Marriott Marquis, New York
Oct. 18-21	SOA Annual Meeting	Marriott Marquis, New York
Nov. 2-3	Credibility Seminar for Health Insurance Actuaries	Westin O'Hare, Rosemont, Ill.
Nov. 3-4	Risk Adjusters	Westin O'Hare, Rosemont, Ill.
Nov. 16-17	Emerging Markets for the New Senior Citizen	Charleston Hilton, Charleston, S.C.
Dec. 7-8	Critical Issues in Underwriting	The Colony Beach & Tennis Resort, Longboat Key, Fla.
Dec. 10-11	Retirement Needs Framework	Buena Vista Palace, Orlando
Dec. 14-15	Product Development Boot Camp	Buena Vista Palace, Orlando
Dec. 14-15	Second Conference on Actuarial and Financial Modeling	Buena Vista Palace, Orlando

For updates on all seminars, watch future SOA mailings. Seminar information will also be posted on the SOA Web site (*www.soa.org*) under *Continuing Education.*

E & E CORNER

Update on E&E redesign

The general officers of the Education and Examination Steering and Coordinating Committee are planning the structural changes needed to manage the new education and examination (E&E) system. They are seeking the most effective ways to ensure the appropriate interplay between practice-specialty interests (within and outside E&E) and the Course 7 and Professional Development programs.

Current committee leadership and the general officers have been encouraged to remain in their roles through a successful implementation, as their experience and expertise will be critical to a smooth transition. Additional talent is being identified and trained. With the additional demands arising from the emphasis on integrating topics in educational treatment and examination questions, effective volunteer training will be crucial and will receive considerable attention.

Test development next for Courses 1 and 2

Now that final reports and other materials for Courses 1 and 2 have been released, test development is the next major step for those courses in preparing for the implementation in 2000. The professional testing firm ACT is expected to manage the test development process at the onset. The SOA and the Casualty Actuarial Society, which jointly administer Courses 1 and 2, have named volunteers to interact with ACT and SOA staff to ensure the educational objectives for the courses are met within the test development process.

Exam length studied for Courses 3 and 4

Final reports, including recommended study materials but not sample examinations, have been released. The joint CAS / SOA working groups are carefully considering the study material and treatment of each topic on the courses and will recommend the appropriate length of each examination. Sample examinations are being created and will be released as they are completed.

Report on material for Courses 5 and 6

The study material needed for each of these courses has been defined.

The working group has determined the existing material is entirely suitable for Course 6, and the major task remaining is to develop a sample examination.

Developing study material for Course 5 represents a distinct challenge. The course will cover underlying principles and concepts for basic practice topics such as design, pricing, and valuation across a range of practice areas. This treatment results in an excessive amount of study material if the topics are covered independently for each practice area. Integrated treatment is planned, and the working group is outlining topic treatment and identifying potential authors to develop the material.

Course 7 tasks ahead

The working group has defined the course structure of 3.5 days. The shortened length, from the 5 days originally envisioned, is based on requiring candidates to pass a pretest on selected reading. Possible prereading material has been identified and is being evaluated.

Current assignments for the Course 7 working group include identification of core and practice-specific study material, the development of a preliminary budget and seminar schedule, and the determination of suitable alternatives for candidates unable to attend a seminar. The final report is scheduled to be released by Nov. 30.

Course 8 reports due this fall

There are seven distinct Course 8s under development, representing advanced actuarial practice in the areas of finance, investment, health and group life, managed care, individual insurance, U.S. retirement systems, and Canadian retirement systems. Learning objectives and initial consideration of study material have been addressed by all the working groups. The various groups are at different stages of resolving appropriate treatment of practice-specific issues and determining what new material should be commissioned explicitly for these areas. The release of the final report for Course 8 - Individual Insurance is slated for Nov. 30. All other Course 8 reports are scheduled for release by Oct. 31.

Board approves PD proposal

A proposal from the Task Force on Professional Development (PD) was approved by the SOA Board of Governors at its June 21 meeting. As approved earlier, 50 units will be required to complete the PD component. The requirement will be divided into attaining at least 35 units from formal programs (seminars, meeting sessions, professional examinations, etc.), of which 20 or more units must come from SOA-approved programs and 15 units from the completion and communication of a project. The project should be related to an issue of relevance to the candidate's practice area.

The candidate's PD plan will be expected to demonstrate direct relevance to the candidate's effective development as a professional and will generally concentrate on a specific practice area. The advisor to the candidate plays an important role in encouraging the candidate to make best use of the program.

A new E&E committee has been formed to flesh out the structure, guidelines, and mechanisms needed for the program to be implemented. The committee expects to be able to release enough information before the end of the year so that candidates can begin thinking about their PD plans. Concerns of the Canadian Institute of Actuaries and the American Academy of Actuaries about candidates meeting qualification standards for specific practice areas also will be addressed, and the two organizations have representation on the committee.

On the Web

All completed E&E reports and sample examinations can be found on the SOA Web site (*www.soa.org*).

on the lighter side

At last: crossing the finish line

by Jacqueline Bitowt
SOA Public Relations Specialist

Devoted bridge player Don Sondergeld has fulfilled his own prediction. At the end of his article "Actuaries and the rule of 11" (*The Actuary*, October 1997), he said he expected "to become an ACBL (American Contract Bridge League) Life Master soon." In a foursome with his wife, Mary, in March 1998, Don crossed the finish line when they won the final gold points he needed.

Don and Mary were getting ready to end a ski vacation in Lake Tahoe when Don said to her, "The nationals are being held in Reno." With all the black, silver, and red points he needed and only 0.15 point of gold away from his goal, Don persuaded Mary to enter the competition. "We played with two ladies from British Columbia," Don said, and the foursome was good enough to win the two matches needed to enter the gold-medal round. Their success in that play gave Don the final gold.

An avid bridge player in college, Don dropped out of serious competition for most of his professional life, then began playing again when he retired in 1991. "I discovered there were many excellent Life Masters and some not as good," he said. "I thought, 'It's not so hard. I can do that.'" He entered his first national tournament in November 1996. Gaining the title was a relief. "I was glad it was over, because I knew it would happen. It was just a matter of when."

Reflecting on the highs and lows of bridge, Don started with the lows. "There are times when you do foolish things and don't get as many points as you know you should have. You think, 'How could I be so stupid?'"

But he had two recent highs to mention as well. The first occurred about two weeks after winning the Life Master title. Don, a "B" player, played with a stronger "B" player (participants and levels of play are ranked A, B, and C based on their master points) in competition, and they took first place in the A strata and first for the entire competition. A few days later, Don approached a high-level B player and persuaded him to be his partner. They played in an event that only A players usually enter. Among 62 pairs of players, some of them champions from Britain, France, and other countries, "We came in eighth," Don said. The pair's success was only slightly more exciting to Don than persuading the top-flight player to become his partner. "When he asked what pairs I wanted to play against, I said, 'I want to fly with the eagles.' I guess he was impressed with my boldness."

The Life Master title ends Don's pursuit, but it's just the beginning of more dedication to the game. "Every bridge hand is different," he said, "and it's really fun to play with good players."
Don Sondergeld can be reached by e-mail at *dsonder@worldnet.att.net*.

Seeking a finish line to cross?

Don Sondergeld says bridge helps exercise the mind and so should be popular with actuaries. He notes that at one time, the leader in accumulated master points was the actuary Oswald Jacoby (1902-1984), considered by many the best all-around card player in the world. He was a bridge columnist, and he won 43 national bridge championships. Might another actuary step up to fill his shoes?

The American Contract Bridge League (ACBL), headquartered in Memphis, Tenn., sponsors tournaments in the United States, Canada, Mexico, and Bermuda. Today, the ACBL has about 165,000 members. Almost 40% of them, 64,000, are Life Masters, and about 60% of ACBL members are women.

To become a Life Master, a player must accumulate 300 points: 25 gold, 25 red or gold, 50 silver, and the remainder any of those or black. Gold and red points are awarded at three national and 150 regional ACBL tournaments annually, silver at about 1,000 sectional ACBL tournaments. Black points are awarded at local games held by the 3,400 bridge clubs associated with ACBL.

"Local clubs offer bridge games, partners, and lessons," Don said. "There are also many good books on the game. Whether you are nearing retirement or not, you can find bridge interesting and enjoyable."

Deadline is Nov. 30 for 3rd speculative fiction contest

By popular demand, the Computer Science Section is sponsoring its third "almost annual" creative outlet for actuaries, the Actuarial Speculative Fiction Contest. First prize is $250, with additional awards for runners-up, depending on the quantity and quality of the entries received.

Serving again as contest judge will be Bob Mielke, Ph.D., associate professor of English at Truman State University, Kirksville, Mo. Also as in the past, winning stories will be published and made available to SOA members. Selections from the publication also will be available on the SOA Web site (*www.soa.org*).

The deadline for entries is Nov. 30, 1998, and authors are expected to be notified of their entries' status by spring 1999. Entries should include two paper copies of the story and an IBM-compatible diskette with your word processing file. Send entries to Carol Marler, 19809-B North Cove Road, Suite 202, Cornelius, N.C. 28031. (This address is for contest entries only.) Questions can be directed to her by e-mail at *carol.marler@transamaerica.com* or by telephone at 704 / 344-2821.

Position open at University of Illinois

A full-time faculty position is available in the Actuarial Program in the Department of Mathematics at the University of Illinois at Urbana-Champaign. Rank will depend on the selected candidate's qualifications.

Duties will include teaching graduate and advanced undergraduate students, research, and professional committee work.

Applicants for a tenured position are expected to be Fellows of either the Society of Actuaries or the Casualty Actuarial Society. A doctorate is desirable. Applications for a tenure-track position should be Associates of one of the professional societies; should have completed the doctorate (or equivalent) by the time the appointment begins; and should present evidence of excellence in teaching.

Applications are due Dec. 1, 1998. Details are available from Philippe Tondeur, Chair, Department of Mathematics, University of Illinois at Urbana-Champaign, 1409 West Green Street, Urbana, IL 61801; telephone, 217 / 333-3352; e-mail, *search@math.uiuc.edu*.

U.S. math team in 3rd-place tie

The U.S. Mathematical Olympiad team tied with Hungary for third place in the 39th International Mathematical Olympiad in Taipei, Taiwan, July 15-16. Pictured at the Einstein statue in Washington, D.C., are (from upper left clockwise) Kevin D. Lacker, Melanie Eggers Wood, David T. Vickrey (alternate), David E. Speyer (alternate), Paul A. Valiant, Kathleen Elder (representing the SOA), Bryan Hearsey [SOA liaison to the Mathematical Association of America (MAA)], Sasha Schwartz (in front of Einstein's foot), Gabriel D. Carroll, and Reid W. Barton. The U.S. team members were among 413 students competing from around the world. Members and alternates were chosen on the basis of performance in the 27th annual U.S.A. Mathematical Olympiad. Its sponsors include the SOA and the MAA.

DEAR EDITOR

Readers look at Social Security

Proposals for personal savings accounts to augment a basic minimum Social Security benefit are frequently challenged by claims that some people will invest unwisely, spend unwisely, or simply not save enough, thus defeating the account's purpose for retirement income.

We must be careful to recognize that decisions made by others for themselves may be appropriate for them even when we would not make the same choice. (For a well-written defense of individual decisions, see "The Myth of the Ignorant American" by James Glassman in *The Washington Post*, June 30, 1998, page A15).

By continuing the existing system, Congress spends every penny not paid in benefits, leaving "bonds" — for Social Security, actually an accounting device in the federal budget — to be paid back by future general taxation. Although presented as "protecting" Social Security, this practice masks federal deficit spending.

Future higher payroll tax rates to continue the current system are the greatest threat to senior citizens' income. We now have a rare opportunity to evolve to a new direction in this crucial social spending program. Future taxes are acceptable to fulfill promises to those currently over 55 and bridge those 25 to 55 to a new system. If we don't successfully complete this evolution, a revolution may sweep away the social equity elements of the current system, such as disability and survivor insurance benefits, as well as the basic defined benefit retirement income — leaving each citizen with only his own defined contribution account. Sen. Patrick Moynihan, D-N.Y., seems to acknowledge this risk in his recent proposals to redirect a piece of the current payroll tax to personal savings accounts. He has been a bit timid in amount, however, recommending only 2% of payroll taxes for personal savings accounts.

Two outcomes are possible if personal savings accounts are tried. At best, the system works as planned, yielding greater total retirement income for future retirees and increased growth in our national economy based on the increased savings (capital) available. At worst, some citizens will fail to act responsibly and the rest of us will feel we should support them anyway. The taxes needed to accomplish this social goal will be less than the taxes needed to support all citizens, as in the current system, and also less burdensome when taken from a larger economy.

Dick Herchenroether

* * * * * * *

I side with Bob Myers in support of the present defined benefit system, ("Actuaries testify on Social Security retirement age," *The Actuary*, April 1998) though I do not agree that raising the retirement age only to 67 will be enough to maintain the system for many decades. When Social Security was enacted, less than 7% of the population had reached age 65 and life expectancy at 65 was about 11 years (males and females averaged). Today, the age that would satisfy both these conditions is 72, and I feel it would be reasonable to set the retirement age for unreduced benefits at 70, to take effect not later than the year 2025, with gradual increases before that year.

I realize that Americans are preferring leisure even well before 65, and also that employment downsizing has laid off people long before that age, but I would hope that raising the retirement age would serve as a signal to our entire society that continued employment would be in our best interest. I am also aware that many blue-collar workers will have particular difficulty in working past 65, as pointed out in a recent General Accounting Office report, and yet I would hope that they could be absorbed in other post-65 employment. When Social Security was enacted, even 65 seemed an impossibly high age, as so many people had been laid off during the Depression, and advocates of the Townsend plan demanded pensions for all at age 60. But age 65 eventually worked out fairly well.

It happens that many years ago, I was one of the actuaries who shared with actuarial legends Miles Dawson and Bill Williamson (first chief actuary of the Social Security Administration) the idea that a much different system was needed: the retirement benefit should have been a flat amount and not based on a wage record, and it should have been made available to all over 65, including the millions who had to stop working years before the inception of benefit payments in January 1940. Had we done this, the benefit amount, even though the same for all at any one time, could have varied from year to year depending on economic factors, and the retirement age could have varied depending on demographic factors. We would have had a far better system without the rigidities that now result in real or apparent crises. We certainly should never have had so steeply graded a benefit as we have today, a policy which grew out of the belief that Social Security was meant to maintain people in nearly the manner to which they had become accustomed, ignoring the need for personal savings and private pensions.

George Immerwahr

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Anna Rappaport's article on national social security ("What's the best approach?," *The Actuary*, May 1998) has inspired me to make a small contribution to the debate. My contribution warns against the simple extension of traditional First World actuarial approaches to systems operating outside of the First World.

The critical features that change the rules of the game are currency instability and ineffective financial markets for the investment of excess funds. Both of these features make funding very problematic.

An example is the Zambian National Provident Fund. Employed people were required (in the 1970s) to contribute ZK50 per month. At that time, there were ZK2 to the pound sterling; today, more than ZK2000 are required to purchase one pound sterling. Anyone who contributed to the Provident Fund in the 1970s will certainly not be happy with the return on investment.

Any country whose currency can be expected to come under special pressure has to carefully consider the potential downside of funded arrangements. This may be one set of circumstances where pay-as-you-go is clearly superior to funding.

Where there are no private investment markets, clearly any funded arrangement would be totally dependent on government debt. This hardly seems an appropriate investment startegy for a significant national social security arrangement. Some argue that the "promise to pay" capital and interest on government borrowing is no better than a government "promise to pay" the benefits on a pay-as-you-go basis. Some governments outside the first world have the actuarial skills available to manage such promises responsibly. However, this is unlikely in countries where no investment market exists.

When we Western actuaries venture to give advice in environments that are very different from those we know, we must be very careful not to assume that what works well in "our world" makes sense everywhere. Who could have foreseen the Asian crisis a few years ago?
Reg Munro

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Will life insurers survive?

The May 1998 issue of *The Actuary* (on the theme, "Reinventing the life industry") was one of the best ever. Our profession is long overdue in dealing with the most critical strategic challenge the industry has ever faced — the threat of slow but sure extinction in the face of a radically changing landscape and the shift in power from manufacturers to distributors and consumers.

The insurance industry has been living in denial for too long. We have created, and continue to perpetuate, a self-fulfilling paradigm that suggests that "insurance is sold and not bought," even as others change the rules around us.

In consumers' minds, there is no longer an insurance industry but only a financial services industry. Those who fail to acknowledge this fundamental shift will not be here tomorrow. Those who make change their ally will thrive, as will their customers, distributors, and shareholders. Likewise, these same shifts present similar risks and opportunities for the actuarial profession.

Change is needed, and it is the subject of distribution that becomes a lightning rod for dialogue on the forces driving change and the implication of those forces. Too often, this dialogue centers on the ownership of the customer. The problem is that the stakeholders in the customer chain — manufacturers and distributors — attempt to each claim 100% ownership of the customer. Instead, all involved must recognize that there are varying degrees of ownership before any mutually beneficial venture will emerge that is sustainable long term.

Like it or not, manufacturers must recognize that in many instances, distributors do have an overwhelming degree of customer ownership. This is especially true where distribution is not owned by the manufacturer (for example, with bank distribution of insurance products). It is less true where the distribution system is owned by the manufacturer, such as in career shops. In either event, insurers must find ways to divorce themselves from the paradigm that insurance is sold and not bought, to strive to understand the customer even when the customer is not "owned," and to understand that no one can have 100% customer ownership. This is the key to building a strong, sustainable customer chain with symbiotic intermediary relationships.

At the same time, as an industry we should push forward on a number of fronts which, over the long term, will guarantee a level playing field where free market forces will allow those with superior intellectual capital and capabilities to win, whether they be insurance companies, banks, or mutual fund complexes. There is a place for all.

Part of the problem is found in some of our attempts to protect the industry's turf.

First, we do not disclose the cost of the advice component of what we sell. Without this disclosure, consumers do not know what they are paying for and whether those costs are commensurate with the value added by each component. This creates a major obstacle blocking free market forces from driving the costs of distribution to efficient levels. It severely constrains the segmentation of distributors by the value proposition they offer to consumers.

Second, the long-term result of inefficient distribution is that capital is transferred from the insurance industry segment to competing segments of the financial services market. It is this same surplus that will be used by banks, mutual fund complexes, or distribution entities to swallow up insurance companies if, not when, the regulatory walls fall.

Third, a high degree of replacements of existing business within the industry significantly increases the friction of delivery of products and services. This leverages up the cost of these products and services. For example, it has been suggested by several industry analysts that about 33% (or more) of annuity sales within the industry are actually replacements among manufacturers. If this is true, it represents a 50% increase in the true underlying cost of the industry's selling component for annuities (the inverse of 100% less 33%.) This creates a massive competitive disadvantage relative to other segments.

Fourth, the concept of customer profitability management is well established throughout the consumer goods and financial services industries — except the insurance industry. Customer management includes the issue of retention, the value of which has been demonstrated everywhere in business. Until the insurance industry learns that retention is not synonymous with replacement, but rather with add-on sales, there may be serious erosion of long-term shareholder value and the underlying capital base relative to other segments of financial services.

There is much hope, and many are seeing their way to solutions of some of these issues. Actuaries must play a significant role if the industry is to overcome these challenges to its relevance in financial services.

Garth A. Bernard Sr.

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The arguments were solid and valid in the lead story and editorial in the May issue of *The Actuary* ("Can life insurers survive a changing world?" and "Facing the revolution"). However, I believe the most important question was left out of the debate.

In particular, I wonder what will become of the insurance industry, as we know it, when the securitization of risk becomes the norm, not just for catastrophe risk, but for everyday, ordinary life insurance and annuity mortality risk. What becomes of the pricing and reserving actuaries when the capital marketplace decides the value of the portfolio placed for securitization? What is the role of the insurer / intermediary in such a world? And on, and on.

Robert L. Brown

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The May edition of *The Actuary*, featuring comments from Bob Shapiro, Bruce Nicholson, Ron Butkiewicz, and others, was outstanding.

The focus on industry and cross-industry issues (and opportunities) for the future was so thought provoking that I immediately routed it, marked "required reading," to everyone in the Atlantic Financial Companies' three offices.

Allen Booth

The Actuary gets 2 new assistant puzzle editors

With this issue of *The Actuary*, we welcome two new assistant puzzle editors, who will work with Puzzle Editor Louise Thiessen.

Steve Kinsky of Denver, Colo., worked in life insurance product development and marketing for 13 years with three large insurance companies before becoming an insurance agent 10 years ago.

"I became seriously addicted to cryptic crosswords to relieve stress while studying for actuarial exams in the mid 1970s," Kinsky said. "When the announcement for an assistant puzzle editor appeared in *The Actuary*, I saw a need. I don't have a life so I do these kinds of puzzles, and now I guess I'll be trying my hand at making them, too!"

Gregory Dreher, an actuarial student, works for Phoenix Home Life, Hartford, Conn. "I have been working puzzles since I was young, and I have also created puzzles, mostly for fun," he said. "People who try my puzzles often complain about the level of math involved, but that shouldn't be a problem for readers of *The Actuary*."

IN MEMORIAM

Henry J. Anderson
ASA 1965, MAAA 1967, FCA 1975, EA 1976

Harold L. Barney
FSA 1974, MAAA 1977

J. Kenneth Davis
ASA 1932, MAAA 1966

Henry J.L. Fortuin
FSA 1953, MAAA 1965

George T. Foster
ASA 1950, FIA 1931

Paul T. Harkness Jr.
FSA 1953, MAAA 1965

Fred H. Holsten
FSA 1942, MAAA 1965

Alex Langlois
FSA 1965, FCIA 1965

Frank D. Logan
ASA 1936

Alvin B. Nelsen
FSA 1949, MAAA 1965

Richard W. Pulley
FSA 1960, MAAA 1965

Kenneth H. Ross
FSA 1945, MAAA 1965, FCA 1960

Thomas R. Suttie
ASA 1950, FCIA 1965, FIA 1940

William S. Thomas
FSA 1947, MAAA 1965

Charles E. Tosch
ASA 1935, MAAA 1966

Geoffrey Westall
ASA 1969, FIA 1968