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Demutualization—one year later

by Linda Heacox, SOA Marketing Communications Manager

In a panel discussion, *The Actuary* looks at the changes demutualization has brought about in four former mutual companies. The panelists, all chief or senior actuaries, take stock of the changes and the state of their companies under the new philosophy.

Moderator Charles C. McLeod is editor of this issue of *The Actuary.* He is senior vice president of RGA International Ltd., Toronto. Panelists are:

- David A. (Allen) Loney, vice president and chief actuary, Canada Life Assurance, Toronto
- Christopher J. (Chris) Sewell, group actuary, CGNU, Plc., London, England
- Barry L. Shemin, senior vice president and corporate actuary, John Hancock Life Insurance Company, Boston
- Stanley (Stan) J. Talbi, senior vice president and chief actuary, corporate actuarial and risk management, Metropolitan Life Insurance Company, New York

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***McLeod**—Tell us a little about your company, what countries it does business in, and its history of demutualization.*

Loney—Canada Life demutualized November 5, 1999. The countries where we do major business are Canada, the United States, the United Kingdom, and Ireland.

Sewell—Norwich Union demutualized in 1997. We probably do 90% of our business in the U.K., but we do business in France, Ireland, Canada, Australia, New Zealand, Italy, Belgium, and a few others. We had branches in Ireland, France, and Canada before, and they had to go through the demutualization process as well. Since the CGU merger, we have divested in the United States. In 1998, Commercial Union merged with General Accident to form CGU. That was a merger of two fairly large companies. Norwich Union merged with CGU last year to form CGNU. We're now the largest insurance group in the U.K.

Shemin—John Hancock demutualized on February 1, 2000, so we've passed the one–year anniversary. We are primarily a U.S. company, but we do own Maritime Life, a Canadian company that has made some significant acquisitions in the last two years. So we're getting to be one of the top companies in Canada. We also have some small life companies in several countries in Southeast Asia: Singapore, Malaysia, Thailand, Indonesia, the Philippines, and China.

Talbi—MetLife demutualized on April 7, 2000 so, we're coming up on our one–year anniversary. Our biggest business is in the United States, obviously, but we do have businesses in several other

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Charles McLeod
Editor responsible for this issue

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The same, but not the same

One of the benefits of being on the editorial board of *The Actuary* is the opportunity to put one's own questions to a group of interesting and well–informed actuaries. The panel discussion I conducted recently with the senior or chief actuaries of four former large mutual life insurance companies was very interesting to me, and I hope it will be also to readers of this issue.

The actuaries who participated in the panel discussion represent three different countries—Canada, the United States, and the United Kingdom. There are many similarities in life insurance and actuarial developments in these countries. Demutualization has taken place in all three (as well as in other English–speaking countries) at about the same time. Financial results are being reported more frequently and faster than before demutualization. The demands on the chief actuaries have increased. Companies are paying more attention to the effective use of capital, for example.

Yet, I was reminded again of the fact that, despite the similarities, there continue to be major differences among these countries. Some are to be expected. With different laws, regulations, and tax codes, it is inevitable that product design will reflect local conditions.

Still, I find it interesting to speculate on why the accounting methods and actuarial reserve methods used in published financial statements in Canada, the United States, and the United Kingdom are quite different. The inherent business (long–term insurance and savings) is the same. Why did three groups of professionals in three different countries, given basically the same problem to solve, come up with such different approaches?

I give you two other questions to consider.

In the last decade, a number of European insurers (e.g., AXA, Aegon) have made some very large acquisitions in the United States. Some of the largest insurance companies in the United States now have European parents.

On the other hand, very few U.S. or Canadian companies have made major acquisitions in Europe, and none of the leading life insurance groups in Europe has a North American parent. Why?

Second question: Both Europe and North America have embraced free trade through the European Union (EU) and the North American Free Trade Association (NAFTA). The EU, with the exception of the United Kingdom, sees the adoption of a common currency as an integral part of free trade and, of course, the Euro will be the common currency in less than a year. In North America, discussion of a common currency is rare. Why is it happening in the EU but not in NAFTA?

In the panel discussion, we talked about the changing role of the actuary in life insurance companies. Steve Prince's article on securitization in this issue provides another example of the new opportunities for actuaries in other fields.

Finally, it will soon be time to vote for the President and other board members of the Society. The supplement included with this issue contains interviews with each of the president–elect candidates so that readers can make informed choices. I have thought for some time that the percentage of members who vote is disappointingly low. This year, please make the effort to vote!

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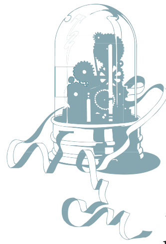
countries in Latin America and Asia. Our biggest and most mature operations are in Spain, Mexico, South Korea, and Taiwan. We also have operations in Hong Kong, Indonesia, Argentina, Brazil, and Uruguay. We have representative offices, but are not yet doing business, in China, India, and Poland.

McLeod*—Please comment on what the biggest changes have been since demutualization.*

Loney—There's a much greater concentration on earnings, particularly incidence of earnings, and structuring our work so that we get continuity of earnings. For example, we try to distribute our reserve basis reviews more evenly over the quarters than we did previously. Communication with the investment market has become a big job. As chief actuary, I've become involved to a much greater degree than I expected. At the time of demutualization, this involved a large amount of time on road shows and investor presentations. Since then, the quarterly analyst meetings require a lot of preparatory time. To be listed on the New York Stock Exchange, we had to prepare U.S. GAAP statements for the first time. For most industries, U.S. GAAP is a fairly modest amendment to Canadian GAAP, but for life companies it's a huge change. And a large part of that change is the actuarial reserving, which is totally different from Canadian GAAP reserving.

"One of the more important roles of the corporate actuary is to make sure that the things we are doing to enhance corporate earnings aren't compromising the long-term economics of the company."

Sewell—The biggest change for me personally has probably been the amount of time I spend communicating with analysts and shareholders. As the group actuary, I have sole responsibility to the shareholders. I think we all underestimated



that element of the role—both the amount of time it would take and the thought process you have to go through. Our objective is to make sure we have a "no–shock" environment. To manage that is quite a challenge. Another change is that, prior to demutualization, we produced only annual results at the end of March or early April. Now, we produce quarterly external results. Annual results are published at the end of February. We produce results within five weeks of the quarter end. So, it's an enormous change in time scale. Internally, it's even faster, because we need the figures so those of us within the company can agree and understand the messages we give to the marketplace. So, our internal time scales are very much tighter than they were. Another change is that, in the mutual environment, we only published results on the U.K. GAAP basis and then at a reasonably high level. In our new environment, we're publishing results on both U.K. GAAP basis and embedded value (called life–achieved profits). We now focus on embedded value results. It's an enormous change. There are two sets of accounts, often with results moving in different directions. And my worst nightmare is that we'll have the U.S. GAAP as well!

Shemin—One change is the time horizon for getting things done. Another is the use of GAAP financial information. Since demutualization, the GAAP financials get the predominant amount of attention. In fact, one of the challenges for a corporate actuary who has some statutory responsibilities is to make sure that adequate resources remain directed at the statutory compliance work—not just reserves, but the asset adequacy testing, as well as compliance with new statutory requirements. Often, all that work is done by the same financial people in our business units that are doing GAAP reporting. On the timing issue, once a year used to be enough. Now, we're doing full quarterly closes on a GAAP basis and monthly updates of selected items.

Talbi—We started our transition in 1998. We started recording quarterly actual GAAP numbers as well as quarterly GAAP projections. Becoming a public company means there are fewer people who can have access to emerging actual and projected earnings because it's all inside information. We find one of the biggest challenges is to avoid communicating too broadly and only communicate information to the very few and select people who need to know. One of the biggest challenges for the corporate actuary is that there is an increased focus on short–term earnings. One of the more important roles of the corporate actuary is to make sure that the things we are doing to enhance corporate earnings aren't compromising the long–term economics of the company. Another major change is that we used to manage our earnings looking at total net income, and now we focus on operating earnings. The difference is really capital gains. The outside world doesn't give you credit for capital gains. In terms of the timing of our reporting, we are at

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the tail end of the acceptable time horizon for our quarterly actual reporting. We are currently going through a basic transition as we migrate to a common general ledger and other reporting systems. We're probably going to remain with our current time schedules until all those systems are in place and all the subsidiaries are on the common ledger—probably another year or so.

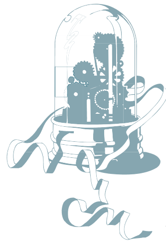
***McLeod**—Are you doing monthly earnings for internal purposes? If not, do you have plans to do this in the near future?*

Sewell—We do that. We have internal management information, which is monthly and is both U.K. GAAP and life achieved profits. It's not done on a year–end basis each month, but it's done on a fairly credible estimated approach. When we introduced that, our businesses screamed, but after about a year, with everything in place, it's working quite well.

Loney—We're now doing monthly earnings. If you want to have a good feel for how the quarter's results are emerging, you have to have monthly earnings. Just the process of cleaning up data monthly helps keep you more on top of things.

Shemin—We don't have a firm plan at the moment. We are considering the possibility of doing a monthly close, which would include a monthly update of year–to–date earnings. We're looking more at the kind of information we need on a monthly basis to manage the business.

Talbi—Not currently. We do monthly projections, and, more frequently, projections of quarterly earnings. Generally, in the first two months of the quarter, we'll do a monthly projection for the quarter and then, when we get to the last month, it's weekly. Certain key financial information is, of course, reviewed more frequently such as expenses, investment



income, and other revenues, without going through a full–scale monthly close.

***McLeod**—How have you found the attention from the analysts, media, and the rating agencies?*

Loney—The media attention is probably less than it was during the period just before demutualization. It seemed as though we, as well as our competitors, were in the papers every day during that period. Media attention has not been quite as intense since then. I wouldn't say a lot has changed with the ratings agencies. We continue to go through a substantial process with them each year. Certainly, attention from analysts is at an intense level, and this is new for us and keeps us on our toes.

Sewell—In the United Kingdom, it's a very similar story. Our major changes in the last two to three years have been in regards to the messages announcing our results. The preparation of those messages takes a long time and needs a lot of formal process. I actually speak with analysts myself. We do a quarterly presentation to analysts, and it's interesting—you don't get many hard questions in that forum. You get all the difficult ones in phone calls afterward. An example would be, "Why is the profit margin trend falling in French business in the fourth quarter?" It's not something we'd answer in open forum, but I may well hint at the reasons in any private conversation I have. Again, we have rules requiring us to share information with all of them if we share it with any one of them.

Talbi—We have several analysts who follow MetLife closely. Our investor relations department speaks to them. MetLife has publicly made commitments as to what it's going to deliver. Analysts want to understand how were going to do it. We had our first blip yesterday in terms of possibly not meeting our promise this year due to our auto and home experience. While that should not prevent us from meeting our three–year commitment to the public, it did get a lot of attention. I was with our investor relations person this morning, and he said he was on the phone until 10:00 last night.

Shemin—The rating agencies can keep the information you give them somewhat confidential though they obviously use it in determining their analysis. We coordinate that out of our treasury department vs. the investor relations department. The IR department coordinates contact with the analysts and wants to be involved in any contacts. I actually have had some contacts with analysts on specific subjects—for example, how the closed block works.

***McLeod**—How have pressures at work changed since demutualization?*

Loney—During the demutualization period, there was huge pressure on the various actuarial teams throughout the company. That was offset to some extent by the great excitement and adventure of the whole process, the pathfinding nature of it. It coincided with our making two major acquisitions—one in Canada and one in the United Kingdom. We've learned to live with that level of pressure. Since that time, we've had the introduction of U.S. GAAP and the development of embedded value reporting, projects not quite the size of demutualization but pretty significant. So the work hasn't abated at all. We've modestly increased our actuarial staff through this period, but still the pressure is high.

Sewell—Two years earlier, we were quoting our results only annually at the end of March or early April. After, we were quoting quarterly within four to five weeks of the quarter end and end of the year. There's been an enormous change in time pressures and in the quality and detail of information. But our major pressure is that I totally underestimated how much time I need to spend in managing our results and our communications with the analysts afterwards.

Talbi—You could work 24 hours a day if you chose. The big thing that's changed at Met in the last two or three years is our whole performance management culture, and that's true throughout the company. Our chairman likes to talk about the officer group, the top 1,000 people in the company. In 1997, we were telling 86% of the officers that their performance was above average while our ROE was fairly low. We've had a pretty significant cultural change where we're more honest about people's performances. We try to isolate throughout the company the top 30%, the middle 50% and the bottom 20%. In the last couple of years, we've seen more turnover at the bottom 20% of the company and significantly less at the top. Part of that is due to being honest with people about where they stand relative to others and also to modifying our compensation programs to more significantly reward those people whose performances are better. The competition has significantly changed in the last couple of years just due to this cultural change.

Shemin—At Hancock, the actuarial staffs are highly decentralized. We have maybe 80 to 90 FSAs in the company. Besides me, the corporate actuarial department includes only three other FSAs. Most of the actuarial work is done in business units, and most of these

units either develop or price products or do financial reporting and analysis. There are fewer financial units than product units. I think the biggest impact has been on the financial units because they are the ones that actually produce the financial results. I may review and certify, but they're the ones who actually do the work. There has been probably a little bit of increase in staffing levels. But I think the impact of having to do things faster, more often, and with increased emphasis on GAAP reporting is that a very high level of competency is assumed so the work can get done. Folks who don't have that level of competency may find themselves very uncomfortable in the job. You don't have time to have a lot of discussions about something and do it a second or third time. It's not so much that more work is being done as it is that more work is being done a lot faster. So people really have to be at the top of their game. Also, there's less opportunity to consider options, speculate, and do some of the things that might be lower on the priority list because there's a need to get essentials done. So, I think performance improvement comes mostly through demands placed on everyone to get things done quickly and correctly. That combination is a change from the mutual era when I think the "correctly" was being emphasized but the "quickly" not so much.

"There's a lot of pressure on the actuaries in the product development areas to create, develop, and implement new products."

Talbi—I would add that at MetLife we are investing significantly in our financial systems to gather information more quickly so that there is more time for analysis. We are mechanizing a lot of the process as a result of demutualization. The other pressures we may be under are that we are very focused on what happens after the three–year commitment we made in terms of earnings per share growth. To get the earnings per share growth we'd like to have, we have to start building more revenue. So, there's a lot of pressure on the actuaries in the product development areas to create, develop, and implement new products.

Sewell—We are spending on systems largely to improve our consolidation process. We've got a lot of businesses worldwide, and our challenge is to get numbers in a timely way and consolidate results.

***McLeod—**You have mentioned that confidentiality of data is much more significant for a stock company. Do you think at times this prevents you from doing things you'd like to do?*

Loney—It means that often you have significant information in your possession that's not generally known. All of us, particularly at the senior levels, have to be careful because we have a lot of interaction with analysts, bankers, and others in the market. They're very sharp and quite skilled at leading you down paths where you might make some remark that's more revealing than you intended. You also have to be careful about disclosing information within the company. For example, it used to be that when you were doing a presentation to a staff group, you'd say, "This is what our

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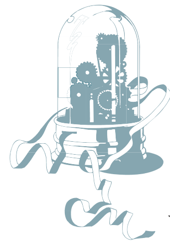
plan was and here's where we are now." You can't do that anymore. You really can't talk about plans to wide groups of staff. It does inhibit communication in that regard. I've got a large group of our actuaries coming in from all over the world next week, and I'm covering some new concepts with them. The easiest way would be to show them the results of some of the work we've done so far. But some of these people are not on the "designated list," and they would not be bound by the same restrictions as people who are on the designated list.

Talbi—I guess I'm on the inside, so I can usually get information I need to do my job. The most difficult part is knowing what information is confidential. We have a lot of people now who understand what the requirements are. We've done a lot of communications within the company. At first, some people were disappointed they weren't getting the information that they were getting previously, but I don't think it's inhibited anyone from accomplishing his or her job.

Sewell—We've got very interesting rules as to who can be briefed. One of the challenges is that if you are motivating staff on profit performance, and you can't tell them or brief them what profit numbers are, it's bizarre. It creates quite a challenge. We've largely resolved that by developing numbers which comprise a subset of totals and, therefore, get around the confidentiality issues.

Shemin—I don't think it has inhibited things too much, because usually after the fact, almost anything can be communicated. There is a period of time when results are on a confidential basis. Normally, the people who need to know do know, and others can find out quickly after earnings are released, when basically anything can be communicated



within the company. We still need to make sure everyone understands what can be communicated to people outside the company.

***McLeod**—How has the planning process changed?*

Loney—We're planning further ahead and in a more detailed fashion. For example, we discuss today (in March 2001) what we'll be doing in the year 2002 in very specific terms. We might say, for example, here's our plan for 2002, and it isn't where we want to be for premium revenue. What are we going to do about that? A number of years ago, we didn't get down to such specifics until the fall preceding the year in question. It was often December before anything definite was agreed upon. Our process is more top down in that the planning starts with a high–level determination of the results we must deliver, in terms of asset growth, or premiums, or ROE, and so on. Then, the various units work to develop specific action plans that will get us to the desired result. It's a sharper, more structured process.

***McLeod**—Have you felt any pressure to adjust the reserve bases to get the earnings targets?*

Loney—No, I can say I don't feel pressured to adjust the reserves because of earnings goals. Obviously, in Canadian GAAP, any changes you make in the reserve basis directly affect the income statement. I have not been subject to any pressures within our organization and have been left alone to determine the reserves that are adequate and appropriate to provide for our future obligations.

Shemin—One of the interesting characteristics of U.S. GAAP is that reserves per se aren't really that big a deal. For fund products like universal life or fixed or variable deferred annuities, the reserve is very well defined. For some of the other products, the reserves, once set at issue, can't really be changed. So you don't really find a lot of issues related to reserves as such. Where the discussions occur is in the area of deferred acquisition costs and how those are to be amortized. The actuary doesn't really have the same kind of defined responsibility for that; nonetheless, there are actuarial aspects to amortization, and I do get involved in many discussions about the appropriate way to handle things. The results are transparent enough to the analysts that you can't get away with propping up your earnings by slowing down your DAC amortization. I would say there was more pressure in the past to release statutory surplus where there were capital needs than there is now around GAAP reserves.

Talbi—I would echo that. There are some policies and reserves that are kind of a GAAP process, and you really don't have any flexibility anyway. We have an internal policy on how to set those reserves at issue, and we follow that unless there is loss recognition testing done that shows them inadequate. We have a pretty strict policy. I don't expect to get any pressure to modify earnings through reserve changes.

***McLeod**—Have you found that stock companies take a shorter–term view than mutual companies?*

Loney—Demutualization puts more pressure on the short term. In the mutual environment, often there was greater emphasis on the long term and perhaps lack of emphasis on the short term. We now look at both the short– and the long–term implications of any action, perhaps more realistically and aggressively than we did previously.

McLeod*—How about actions that would impact your level of capital?*

Loney—One of its prime functions of capital allocation is that ROE allows you to balance different businesses. For example, if there's a business that's producing $35 million of earnings and another that's producing $75 million of earnings, which one is really doing better? The most logical way to measure that is by finding measures of capital for those businesses and observing which has the superior return. It also allows us to tie in our pricing and new business activities to a greater degree to the income statement and to capital utilization. So there is now more emphasis on that. Also, we are paying more attention to how we can minimize our use of capital so that we can develop excess capital for initiatives such as buying lines of business, acquisitions, and so on. So we are looking more aggressively at actions that would help contain capital utilization. Reinsurance is a very obvious example of that type of initiative.

"Since demutualization, we have focused more on getting our businesses to significant mass where they really count in their respective markets."

Talbi—We're spending more time than we did previously. A lot of it is looking at what our real capital needs are. We have a statutory capital level, of course. We have our own GAAP internal capital allocation method, which is based on risk–based capital. Then we have a third method based on value at risk. What we're doing is managing our capital to the value–at–risk level. We feel that's the best measure of the actual capital that's needed for our business. We are spending more time at moving capital around, making more efficient use of RBC to the

extent that the statutory capital requirements are in excess of what we feel is really necessary based on our own analysis.

Shemin—There continues to be emphasis on that. There was, before demutualization, because your internally generated capital was the only capital you had, and capital was very important to ratings and the ability to execute business initiatives.

Overall, the emphasis isn't any greater, but it has changed to trying to look at the efficiency of capital. We also have actions at the corporate level similar to what Stan has mentioned that try to free up capital. The thing about freeing up capital is that you could deploy it within the insurance company to generate higher returns, or you could dividend it up to the holding company within the state limits. Once there, it could be used to invest in non–insurance businesses or to buy back stock, which improves earnings per share, which improves shareholder value. There is a lot of emphasis on efficiency rather than just generating and keeping capital. Actuaries are not the only ones involved in this, but there are a number of actions that take advantage of actuarial competencies that are on the plate. We've done some reinsurance, and we are also in the process of reviewing how we measure our capital allocations to business units.

Sewell—I'd echo all of that. In the mutual environment, we were under more pressure in managing capital than we are now. Except for one thing, we are acquiring companies by the day and therefore need more capital. Our pressures in that respect are fairly great. We have internal targets for our businesses such that if they achieve a higher return on equity, we have incentives in sending capital back to group, which works fairly well.

McLeod*—What about discontinuing or selling less profitable lines of business?*

Loney—At the end of last year, we sold a line of business—our casualty company, which actually was doing quite well, but nonetheless was not a core business. In order to have become a bigger player in that line of business, we would have had to invest a lot more money. It wasn't an area in which we had core expertise, so we sold that business. At the same time, we purchased a group retirement savings business, and when we amalgamated that with our existing book, it took us to a market leadership position in Canada in group retirement savings. Since demutualization, we have focused more on getting our businesses to significant mass where they really count in their respective markets. The converse is that it's making us more inclined to de–emphasize, discontinue, or not enter lines of business in which we don't feel we can achieve a market leadership position.

Sewell—We are always eliminating products that are not profitable and attempting to increase profits on ones we can sell easily.

Talbi—We're probably less tolerant of long periods for new ventures and new ideas to take hold and less tolerant of under–performing businesses. The

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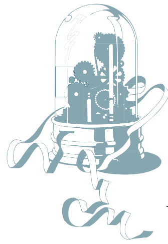
people running those businesses are challenged to reach an acceptable ROE as quickly as possible. I think, before, we were able to take a longer–term view.

Shemin—Prior to demutualization, we did quite a lot of pruning of our portfolio in preparation. We exited the group medical business, the securities brokerage business, the HMO business, the P/C business, and probably one or two others. We're now quite satisfied with our business mix. We do get pressure from securities analysts when we have a unit that's temporarily under–performing. We get questions about selling it. I would say right now that management has a longer–term focus than investors, or the analysts who represent the investors, do. Basically, we've exited all the businesses we determined didn't fit us well. The ones that are left, we feel we can succeed in. The change is that there's more external pressure. I don't think there's too much change in our own outlook about exiting a business, and should we find one whose under–performance seems to be chronic, it would be addressed.

McLeod—*How does your role as chief or group actuary compare with that prior to demutualization?*

Loney—I was surprised by the degree to which I get involved in investor communication. Also, a number of the things that have come along, U.S. GAAP (for a Canadian company), embedded value, and so forth, can only increase the role the actuaries play in the company. Embedded value particularly is regarded by most people as an actuarial preserve. In Britain, it's become the major measuring rod of a company's performance. In Canada, that may not happen because Canadian GAAP is a reasonably well accepted reporting system. Nonetheless, Embedded Value will give important insight both to management and



investors, and actuaries play the key role in developing Embedded Value.

Talbi—I may be the newest in this role. There are some things as chief actuary I'm responsible for, like oversight of actuarial activities including adequacy of pricing and valuation methodologies. What we've done is adopt actuarial practice standards. There's a reporting mechanism, for example, on new products that the various lines of business are required to follow and report on. That's our mechanism for monitoring that activity without building a huge staff. We have very few people to review that kind of thing. Within our corporate area, we also have responsibility for reinsurance, valuation, and dividend policy. One of the most important roles of the chief actuary is to work on special projects for the chairman and the executive group. Other than an expectation of adding more value with fewer people, the role of the chief actuary has not changed significantly.

Shemin—I've been in the job for six years now, so I've seen both forms of organization. I think the role's changed a bit. The corporate actuary is still viewed as someone with a degree of independence who reviews the work of other actuaries in the company in one way or another. I joke that we never do anything original, we just review the work other people do. But, that's not entirely true. The way Stan describes it sounds pretty similar to ours. We have a pricing review framework, but with just a few people, we can't be heavily involved in reviewing all the pricing that's being done in the business units. We try to pick our spots, and we have various other mechanisms where there's reporting on pricing. We have periodic meetings, which include pricing strategy discussions to try to bring to the surface whatever issues might be around. Similarly, on the financial side, even though I have responsibility for certifying the reserves, the actual reserve calculations are done under the supervision of the business unit financial people. There, too, I'm in a review capacity. We have standards for that, too. And, like Stan, there are special projects that get thrown at you. You sort of have to assemble groups of people or seek consulting advice to bring resources to bear on these special projects, which could be almost anything.

Sewell—My role as group actuary has increased enormously over the last year or so. I was group actuary pre–demutualization. My focus has changed enormously. I have a monitoring role for all our life businesses worldwide. I also spend a lot of time assisting accountants in understanding our business, which is not uncommon in the U.K. An appointed actuary in our life business in the U.K. has a larger role as well. As part of demutualization, rules and regulations are agreed with the regulator and a lot of onus is on the appointed actuary to protect the interests of the policyholders who were there at that stage. So, not only is he running a day–to–day job, he's also protecting interests in accordance with the rules and regulations agreed upon. So both sides of the actuarial field have seen increased workload.

McLeod—*How has the role of actuaries changed since demutualization? Are life companies a better place to work or not such a good place as before?*

Talbi—They're a great place to work. Have the roles changed? I'd say before demutualization the actuaries were financial experts in the company, not only the financial engineers, but financial experts. Now, there's more of a spread of financial expertise among accountants, actuaries, and investment relations types. There's a broader mix of financial disciplines. I think it makes the company stronger, sharing the different points of view. I'd say the actuaries remain the experts on the product.

Sewell—I'd echo a lot of that. It's a challenging and exciting role in a life company in the U.K. Accountants have had an increasing role in managing our finances, at group level in particular. One of the aspects happening over here is that finance directors are largely accountants now, whereas in the past, it was very common to have a joint role of actuary and FD. An actuary has a supporting role. In some cases, it's a role at a similar level to the FD, and in some, the actuary reports to the FD.

McLeod—Does this mean the role of the actuary is diminished?

Sewell—At a board level, probably yes. It's a trend that's been happening for some time.

Shemin—Let me make a couple of observations. First, I think actuaries' roles have become somewhat more focused in their areas of competency. That relates back to my point about the pressure to get things done quickly and correctly. People focus on the roles in which they are most competent. Actuaries may not branch out into other fields quite as often because there's less tolerance for long learning curves. Having said that, let me make a couple of points—one on the financial area and one on the product area. In the financial area, I think actuaries and accountants have to work together much more closely than in the past, because the way the earnings emerge has a lot to do with the way products are structured

and designed. Actuaries have a very good understanding of the way products are designed, as well as the accounting systems, and influence the emergence of earnings and variations of that emergence of earnings. Although I think accountants are the first ones looked to in explaining their results, actuaries have to work very closely with them in order to get meaningful answers. It's not enough to say that profits went up because the premiums went up and

"Good product design and pricing take a high level of skill, and that puts a premium on the skills of the actuary."

benefits went down. That doesn't tell you very much. You need to get behind that and talk about whether it came from mortality rates or interest spreads or other sources. On the product side, product development capabilities need to be sharper. If you don't do a good job of product design, independent channels will sell someone else's product, not yours. Good product design and pricing take a high level of skill, and that puts a premium on the skills of the actuary.

McLeod—A final question: Was demutualization in the best interest of the policyholders?

Loney—Demutualization was a good thing for our participating policyholders. They received significant allocations of stock, valued at the time at an average of C$7,000 per head, and since demutualization, our stock price has more than doubled. Also, the participating policyholders' reasonable expectations are very strongly protected by the establishment of Closed Funds. The assets of the Closed Funds are for the participating policyholders' sole benefit, and they were started with assets sufficient to meet their reasonable expectations.

Sewell—Yes, it was. In our case, most of our policyholders received shares in the company and some other cash payouts. On average, our policyholders are better off and have benefited from the changes. What's more, we were one of the first. Many others have now followed suit, so what we did stacks up in the market.

Shemin—You can get into philosophical debates about current vs. future policyholders. There's no question that current policyholders have benefited. They've received shares or something else of value, and they've also received protection, mostly through the closed block that their dividend expectation has been preserved. There's little question that they've benefited. You could argue that future policyholders would have benefited from the mutual philosophy. But it's awfully hard to say how much that's worth, and the current policyholders were the ones in control of the company.

Talbi—Yes, everybody is well off as a result. I'd say the whole reason was really to give the company more capital flexibility. So if we were to march forward as a mutual company, we would have gotten smaller relative to other financial companies. We couldn't have competed as effectively. With access to capital markets when necessary, we can remain a relatively strong company, which benefits our current and future policyholders.

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Securitization of insurance transactions

by Steve Prince

Securitization of insurance transactions is an evolving topic in the reinsurance world. This article will overview its basic forms, describe where it tends to be useful, and discuss some of its limitations.

What is securitization?

In general terms, securitization is any case where the cash flows of one financial instrument or contingency are replaced by another cash flow, typically a lump sum up front.

Outside the insurance world, a simple example of this occurs when a retailer at your local mall does factoring of his receivables.

A local retailer is typically holding a large amount of accounts receivable on his balance sheet. He would prefer to have cash now. One solution is to take these receivables to the bank as collateral for a loan. If his customers do not pay their bills, the retailer makes up the difference to repay the bank.

A second solution is to sell the receivables in a factoring transaction. Unlike a loan, the bank or factoring company takes the collection risk. In other words, it is the factoring company's problem, not the retailer's, if customers don't pay their bills. The factoring company, of course, reflects this risk by providing less cash than they would with a simple loan.

Securitization in insurance works much the same way. An insurance company has a stream of uncertain future cash flows or profits coming from its policies. It may need cash now. Securitization is one way to get that cash.

How does that work?

Every actuary will agree that the cash flows related to an insurance policy are uncertain. It is less common to talk about attaching a probability curve to those cash flows.

With the right stochastic model, it is possible to analyze a reinsurance transaction the way a factoring company would look at the receivables. If the company puts up $X of funding, how many years will it take to recover that funding while charging interest at a certain rate?

An insurance company has a stream of uncertain future cash flows coming from its policies. Securitization is one way to get cash now.

If you can answer that question in those terms, you are able to approach the financial markets of the world and look for cash. The financial markets look at this much like a factoring transaction. With the right analysis, they are willing to take the repayment risk.

In the purest sense of the word, securitization involves issuing a security (e.g., a debenture or other financial instrument) on the capital markets of the world. A small number of transactions have been done on this basis. It tends not to be popular because the process of issuing a security requires compliance with securities laws, which then entails very large legal and securities fees. The fees can run into the millions of dollars, which means such transactions are economical only when amounts over $100 million are being raised.

Second generation securitization

All of the securitization transactions I have been involved in have avoided the costs of the securities filings because they are written as reinsurance transactions. Actuarial analysis assesses the probable timing of repayment. Having completed the analysis, however, the reinsurance company simply issues the funds under the paper of a reinsurance contract. From the reinsurer's point of view this is a funding transaction for which the implicit cost is similar to other funding transactions. From the insurance company's point of view, this is a very inexpensive way to finance new business strain or manage regulatory capital.

Table A summarizes a typical analysis. First, significant analysis is done on the underlying insurance portfolio and the dynamics that affect its profits.

Then, a stochastic profitability model of the product line and the reinsurance transaction is developed. This stochastic model will, for example, have lapses and claims and interest rates randomly vary with whatever interrelationships are appropriate.

Finally, the stochastic model is run thousands of times to develop probability curves of time of repayment of the funding amount.

In Table A, two funding levels are shown, assuming funds are advanced at (a) 75% of best estimate net present value of profits and (b) 60% of best estimate.

As expected, when fewer funds are advanced against the same profit flows, repayment is generally sooner. The key here is that by quantifying this relationship, it is possible to talk about how much money can be advanced in a particular situation and what the likely time of its recovery will be.

In Table A, with funding at 75%, there is a visible blip in the 10+ period, meaning that repayment would be beyond 10 years, if ever. In securitized transactions, the timing of repayment is of great interest. Reinsurance counterparties have strong opinions on credit exposures and on how long they want to be exposed to any one client and his possible changes in fortunes.

Cost advantage

The main reason a company would look for this type of transaction is that it can be at a substantially lower cost than a typical quota share or financial reinsurance.

With typical transactions, the reinsurance company is providing the funds or balance sheet relief from their own free capital. Somewhere in the transaction, they have to earn equity–type returns on that money, such as 15%.

In a securitized transaction, the party providing the funds is looking to earn a loan–type fee on their funds advanced, typically 8% to 10%. Transactions are typically quoted as a certain number of basis points above the inter–bank rate or the T–bill rate.

This lower cost of reinsurance funding translates into leveraged returns to the insurance company, as shown in Table B.

Suppose a company has a product which has an initial strain of $1000 and annual profits thereafter of $165 per year for 10 years. The insurance company has an internal rate of return of 10%. It approaches a reinsurer and gets $500 of surplus relief. The reinsurer expects to take about $100 per year of profits from the transaction to get its required 15% IRR. This charge reduces the profits to the ceding company, bringing its IRR down to 4.3%.

Option number two is to develop a securitized transaction. After suitable analysis, the reinsurer concludes that it only needs to take $75 of profit out of the same transaction to recover its initial funds with an IRR of about 8%. Looking at the direct company's profits after this transaction, it sees its IRR has actually increased to 11.7%.

The key here is that the reinsurer is not using its own equity to fund this transaction. The reinsurer has access to cash from

Table A

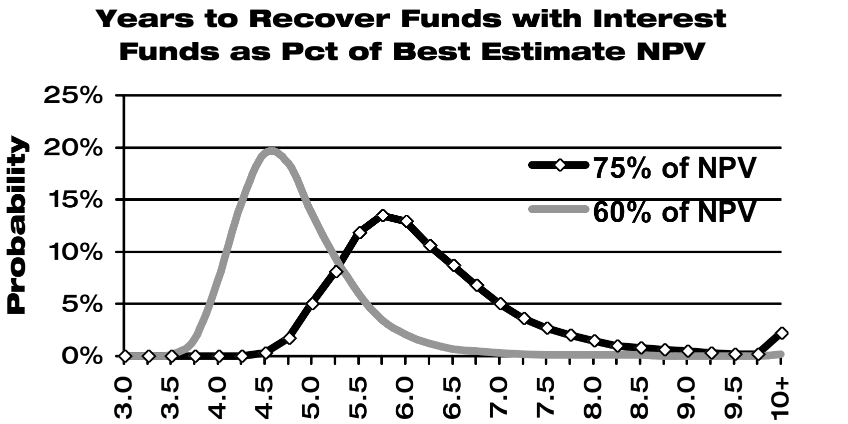

Table B

		Traditional Reinsurance		Securitized Reinsurance	
Year	Company profits pre-reinsurance	Reinsurance	Company profits after reinsurance	Reinsurance	Company profits after reinsurance
0	(1,000)	500	(500)	500	(500)
1	165	(100)	65	(75)	90
2	165	(100)	65	(75)	90
3	165	(100)	65	(75)	90
4	165	(100)	65	(75)	90
5	165	(100)	65	(75)	90
6	165	(100)	65	(75)	90
7	165	(100)	65	(75)	90
8	165	(100)	65	(75)	90
9	165	(100)	65	(75)	90
10	165	(100)	65	(75)	90
	10%	15%	5%	8%	12%
	Direct Company's IRR	Reinsurer's IRR	Company's IRR	Reinsurer's IRR	Company's IRR

(continued on page 12)

various sources, some of which are debt. The reinsurer typically has an IRR target of 15% or more on its capital but not on the cash that is required under the transaction.

Expertise required

Two special types of expertise are required to develop a workable securitized reinsurance transaction.

One is the stochastic modeling capability to develop the repayment probability curves noted earlier. Stochastic models reflect not only the variables in the underlying insurance portfolio, but also variables in the reinsurance contract itself. These variables can include sliding scales of charges as experience unfolds, floating interest rates on notional account balances, and the likelihood that either party might exercise some option under the contract.

The second required expertise is the ability to develop contracts that satisfy all parties with their different respective requirements. The reinsurance contract must satisfy auditors and regulators as to the legitimacy of the risk transfer for it to receive the desired reinsurance accounting treatment. The party providing the funds is looking for very safe contract provisions to justify their debt–like rates of return.

What this isn't

A securitized transaction occupies a unique point in the spectrum of reinsurance transactions.

◗ **This isn't financial reinsurance.** With financial reinsurance, the intention is generally a risk–free transfer of balance sheet relief. Various jurisdictions have regulations in place to deter such transactions. With securitized transactions, the contract language makes it clear there has been a transfer of risk.

◗ **This isn't a loan.** From the ceding company's point of view, they have entered into a reinsurance transaction, and there is no requirement to repay the initial funding if the profits do not materialize as planned. The reinsurance contract is written by a reinsurance company suitably licensed to transact business in the ceding company's jurisdiction.

◗ **This isn't cashless.** In the bulk of transactions I have been involved with, the reinsurer transfers significant cash to the ceding company to help with their new business strain and balance sheet strength. The fact that significant cash changes hands resolves most regulatory issues.

◗ **This isn't a catastrophe bond.** This is at the other end of the risk spectrum from a catastrophe bond, which has a very low probability of being of benefit to the issuing company. It is carried on the company's books as a loan or other liability, and it converts to surplus only if specific, very unlikely, events occur. Securitized reinsurance is the diametric opposite. It provides the surplus relief all the time. In the unlikely event that profits do not materialize as planned, the problem stays with the reinsurance company, not the ceding company.

◗ **This isn't a mortality guarantee.** Many reinsurers are offering very attractive reinsurance terms these days for conventional–looking YRT or quota share coinsurance. They are doing so because they believe there will be sufficient future mortality improvements to justify those attractive rates. The key difference is that a securitized transaction is an additional source of leverage for more attractive reinsurance costs. If a company has recently ceded all the mortality risk to a reinsurer in exchange for attractive rates, it is still possible to write a securitized transaction around that same business. In fact, with guaranteed reinsurance charges taking the place of less certain emerging claims, it is possible to get even more leverage from a securitized transaction after the reinsurance than before.

Typical applications

A securitized transaction makes sense when a company has a predictable stream of future profits, and it needs cash now. The need for cash now is usually related to aggressive growth. If a company needs cash and isn't growing, it probably isn't making money either, in which case there isn't much profit to securitize.

Securitized transactions work best when the future profits are predictable and when there is a demonstrable track record of performance. If a company is expanding rapidly in a new product line, the company should consider a securitized transaction on a block of existing business. That business is generally more predictable, more stable, and more likely to have the proven track record of profits reinsurers would be looking for.

Limitations

A securitized reinsurance transaction involves more up–front analysis than a typical quota share transaction, so a substantial portfolio is needed to make the transaction cost effective. Unlike most reinsurance, the reinsurer will require an up–front fee before doing serious analysis on the portfolio. Typically, funding amounts of at least $10 million are needed to justify the expense of the initial analysis. This minimum is far less than the $100 million needed to justify a full–fledged securitization with the issue of debentures or other financial instruments.

Newer product lines, unconventional benefits, and new distribution sources for a company all make it more difficult to satisfy the requirement for predictable profits.

As well, significant attention is devoted to the creditworthiness of the ceding company. The company's total balance sheet and financial situation are reviewed with as much attention as the individual product line profitability. Good ratings from one or more rating agencies are helpful in passing this hurdle. A company that is having financial problems—rather than merely strain and timing issues—generally cannot satisfy these requirements either.

***Steve Prince is a consulting actuary who has worked on securitization of reinsurance transactions in North America, Europe, and Asia. He can be reached at* stevenp@dion-durrell.com.**

Conference focuses on aspects of annuity products

by Anna M. Rappaport

On April 5–6, 2001, more than 400 individuals gathered for the fourth annual Annuity Conference, which is sponsored by the Society of Actuaries in partnership with LIMRA and LOMA.

Conference participants included actuaries, administrators, and marketing professionals who were focused on the development, administration, and sale of annuity products. The program's interdisciplinary approach provided an excellent opportunity for professionals with diverse backgrounds to exchange ideas and to look at challenges from different perspectives. Exhibits offered participants the chance to view support services and software and to try them out through demonstrations.

As an actuary focused on the development and management of pension plans, I was more of an observer than an active participant in the product discussions. My concerns are heavily focused on the security of an aging population and on how people will meet post–retirement risks in this era of individual responsibility for retirement and payment of lump sums from qualified plans.

The conference started with a presentation by Dr. Jay Olshansky on trends in mortality and life expectancy. Dr. Olshansky is a co–author of *The Quest for Immortality.* He provided perspectives on why the gains in life expectancy will slow in the future and discussed the biology of aging. Further gains must come primarily from changes in mortality at high ages, whereas, most of the gains of the last century came from gains at earlier ages.

A panel of insurance industry leaders provided perspectives on using annuities to meet risks in retirement. This panel bridged the issues between the retirement needs of the public and how the insurance industry might address them. Most of the focus in retirement planning has been on saving money and on the pre–retirement period. The Society of Actuaries' Retirement Needs Framework project is focused on the post–retirement period.

The current period is one of great challenge and opportunity with regard to annuities and their use. Summarized here are the main points I took away from this year's Annuity Conference:

- Most of the sales today are of deferred annuities, which are primarily an investment product. Sales of immediate annuities are growing.
- Immediate annuities are used in different ways—to provide retirement income, or to finance premiums for life insurance and long–term–care insurance. As retirement planners, our focus is on our clients' outliving assets or being pushed into declining standards of living. But there is relatively low public awareness of these risks, and annuities are usually not the preferred choice for managing retirement income.
- As we think about issues related to immediate vs. deferred annuities, there are major differences between handling the two of them. Key points are included in Table A.
- There are many innovations in annuity products, and companies are working to give consumers more choices. The tradeoffs for more choices are greater complexity plus the cost of special features and options. Some of the special features are guarantees of principal or part of principal in variable annuities, liquidity provisions in immediate annuities, and indexing of payments. Combination products are another area of innovation.
- Product complexity is a major challenge. Complexity creates the challenge of having a product that will work well with agents as well as in having a product that will appeal to buyers.
- The challenges to the insurance industry are not just in developing good products, but also in successfully distributing them. Two audiences need to understand the products and the need for them—agents, or other intermediaries, and the public.
- As with other insurance products, there are tax advantages and considerations in the use of these products. This can make them very attractive to high–net–worth or high–income individuals. The factors in

Table A

Factor	Accumulation Phase	Distribution Phase
Importance of annuity in total financial picture	Relatively minor	Can be very important
Activity pattern and health	Expect to be working and healthy	Probably retired and health may decline
Sources of support	Salary usually primary	Multiple sources
Period of time	Defined by individual and end of work	Defined by death or death of survivor—high degree of certainty
Involvement of heirs	Little in most cases	May be more involved

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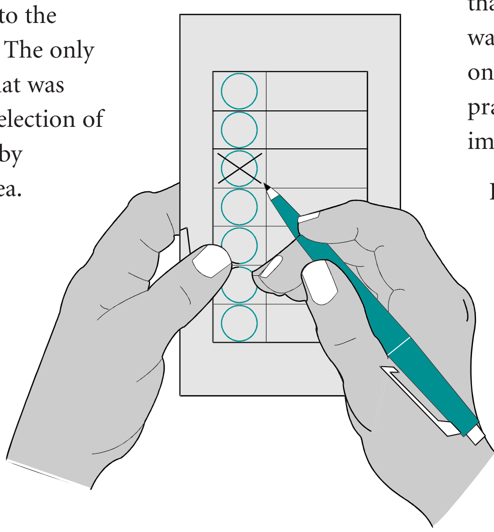
Survey results reveal Fellows' views on SOA elections process

by Stuart Wason and Cheryl Enderlein

A Task Force on Elections was formed late last year to review the Society's election process and consider recommendations for improvement. The Task Force surveyed all Fellows earlier this year regarding their perception of the effectiveness of the current SOA process.

Perhaps the most important overall reaction expressed by responding Fellows in the survey is that they are very much in favor of the democratic process for electing their leadership. In addition, they appear not to favor any radical changes to the current process. The only major change that was endorsed is the election of vice–presidents by each practice area.



Approximately 16% of Fellows responded to the survey. Those who responded appear to be regular voters in our elections, active in Society activities, and otherwise seem to represent a cross–section of our Fellows (i.e., survey respondents seem representative of all Fellows). Of the respondents:

- 95% have not served on the Board of Governors;
- 93% have served on fewer than six SOA Committees or Task Forces (47% on 1–5 Committees/Task Forces; 46% on none)
- 86% vote regularly in Society elections

Representative distribution

A major theme of the survey involved the need for representative distribution on the Board of Governors. Ninety–three percent of respondents agreed that representative distribution of some type on the Board of Governors is important.

When asked to rank the importance of country/residence, area of practice, and type of employment as considerations in determining representative distribution, 63% of Fellows answered that type of employment was most important, while only 24% ranked area of practice as the most important.

In a somewhat contradictory response, the survey also indicated strong support for each major practice area to elect its own Vice President. Readers of this article may be interested to know that a review of the structure and function of practice areas and Sections is one of the key strategic initiatives identified in the Strategic Plan. Therefore, the Task Force is planning to recommend to the Board of Governors that the Strategic Planning Committee be charged to address this issue as a priority.

The Actuary helps voters

Another finding of the survey was that the interviews with president–elect candidates published in *The Actuary* is the predominant means by which the Fellows learn about the candidates in order to cast an informed vote. More than 50% had no opinion when asked if the presentations made by the candidates at the spring meetings were helpful.

Ballots, voting process

Regarding ballots, 83% agreed that the reference list of possible Board candidates on the first ballot is helpful, and 54% agreed that the current two–ballot electoral process is preferable to a one–ballot system.

The results of the survey reaffirmed the strong interest in voting and participating in SOA elections, although the overall percentage of Fellows who vote continues to be only about 34% on the second ballot and much less on the first.

Thanks to all Fellows who participated in the survey. The Task Force on Elections is slated to present its recommendations to the Board of Governors in June. Further updates, including problems with the current elections process and possible solutions, will be published in the September issue of *The Actuary.*

Stuart Wason is Chairman of the Task Force on Elections. He can be reached at **stuart.wason@ca.wmmercer.com.**

Cheryl Enderlein is Executive Administrator with the SOA. She can be reached at **cenderlein@soa.org.**

soa web report

Forums

Dialogue with the president–elect candidates. Visit the SOA discussion forums between June 11 and July 2 to read candidates' responses to questions. By registering for the discussion forums, you can even post your own questions.

Virtual campus

Participate in e–learning without ever having to set foot in an airport or sleep overnight in a hotel. The virtual campus is open 24 hours a day, seven days a week, to deliver courses on your time and on your schedule. New programs added to the campus include:

- The Art of the Expert Witness
- Fair Value Liabilities
- Prescription Drug Benefits
- Retirement Benefits Design
- Risk Management Practices
- Tailoring Products for the BancAssurance Market

Annual meeting

Beginning mid–June, look for the New Orleans annual meeting preliminary program on the SOA Web site under Meetings/Seminars.

Consultants/small firms

Interested in issues confronting actuaries working for small consulting firms or as sole practitioners? We want to hear from you! Fill out the survey at *http://www.soa.org/sections/pension/small_consulting.html* to express your interest in establishing a new Special Interest Section for small consulting firms. This new Section would also maintain a working relationship with the Pension Section.

Mo Chambers serves as IAA President

Mo Chambers, SOA Vice President, began his one–year term as president of the International Actuarial Association (IAA) on January 1, 2001.

The IAA President chairs the organization's Executive Committee, which coordinates activities and operations and proposes strategies, budgets, membership fees, and meeting venues for its Council of officers and delegates.

Serving as the link among actuarial associations worldwide, IAA is the international organization dedicated to the research, education, and development of the actuarial profession and its associations.

Mo Chambers, is vice president and senior actuary, Corporate of London Life Insurance Company in London, Ontario, Canada. He has been involved as a volunteer with the Society of Actuaries by serving on various committees in addition to his service to the Board of Governors. He is a former President of the Canadian Institute of Actuaries.

Annuity conference

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making a product attractive to high–income individuals are different from those that make them attractive to middle Americans.

- Middle Americans face a serious problem of outliving assets. For couples, there is a particularly serious problem for the survivor, once one member of the couple dies. For high–net–worth Americans, the problem is more one of estate planning and tax planning.
- Financial literacy is a big problem for many Americans. For those who are interested, a number of Web sites offer good information on the subject. Some of these sites are sponsored by annuity writers. Not–for–profit organizations, such as Wiser *(www.wiser.heinz.org)*, are another source of retirement planning information. Wiser is targeted to women, but the information it offers can be helpful to all.
- Technology offers opportunities to companies to streamline both the sales and service processes. However, experience with direct sales indicates that most people are unlikely to buy directly without assistance.

I was pleased to be able to participate in this important conference where discussion focused on different market segments—the high–net–worth population and Middle America and its need for greater security in retirement.

I am particularly concerned about Middle America. As employers have changed their role in retirement planning, and as more company benefits are paid as lump sums, opportunities to secure regular income are important. I hope to see more use of annuities in that role and product innovation that will support it.

Members interested in more information from the conference can purchase tapes of the sessions. A similar multi–disciplinary conference on long–term–care insurance was held in January, and plans are underway for another long–term–care insurance conference in 2002.

***Anna Rappaport can be reached at* anna.rappaport@us.wmmercer.com.**

CIA symposium scheduled for September

The 2001 Symposium on Stochastic Modelling for Variable Annuity/Segregated Fund Investment Guarantees will be held September 5, 2001 at the Royal York Hotel in Toronto.

Designed to advance education and research in areas of interest to actuaries working with investment guarantees, the event is sponsored by the Canadian Institute of Actuaries (CIA).

The symposium will include concurrent sessions that cover material of interest to both practitioners and decision–makers. Sessions will provide an opportunity to learn from the experience of implementing the recommended stochastic approach to establishing policy liabilities for segregated fund investment guarantees. Topics to be considered include:

- Business and product design implications
- Selection and calibration of long–term investment return models
- Modeling specific funds—benchmark or proxy funds and basis risk
- Using stochastic models to establish actuarial liabilities
- Stochastic capital requirements
- Hedging
- Product features and policyholder behavior
- Practical implementation issues
- Areas for further investigation

Symposium participants may also wish to attend the adjoining AFIR Colloquium scheduled for September 6–7 at the same location. The colloquium's theme will be risk management.

Registration and program information for the symposium will be available on the CIA Web site at *www.actuaries.ca/meetings/segfund_e.html.* Or contact Christian–Marc Panneton *(christian-marc.panneton@inalco.com)* or David Gilliland *(dg@ggy.com).*

Act now for exhibit space at annual meeting

The New Orleans Hilton Riverside Hotel is the place, now is the time to sign up for exhibit hall space at the 2001 Society of Actuaries annual meeting. Scheduled for October 21 through 24, the SOA annual meeting offers one of the best opportunities to reach actuaries who make purchasing decisions for their companies.

Exhibiting at the once–a–year event is an affordable way for firms to showcase their technology, consulting, mergers/acquisitions, reinsurance, underwriting, risk, or coverage services. Early registration is encouraged, as space is limited.

For more information, visit the SOA Web site at *www.soa.org,* click on "Meetings/Seminars," then click on "Exhibit Information." Or phone Cheryl Biedron, SOA Meeting & Exhibit Coordinator at 847/706–3516.

Actuarial Research Clearing House steps into the future

To keep pace with technological change, the *Actuarial Research Clearing House (ARCH)* will be available in electronic form on the Society of Actuaries' Web site *(www.soa.org)* beginning with the 2001.1 issue.

Although the format of *ARCH* is changing, it will continue to serve its purpose of providing current actuarial research to friends and members of the actuarial community.

Moving to the electronic format is expected to facilitate the achievement of *ARCH*'s primary goal—the speedy dissemination of current thinking and aids to research, rather than the publishing of thoroughly edited papers.

SOA members are encouraged to submit items to *ARCH* and can send them (preferably in Adobe Acrobat portable document format–pdf, or Microsoft Office Suite) to Joan Skifano in the SOA office *(jskifano@soa.org).*

The Education and Research Section, which sponsors ARCH, invites Society of Actuaries members and non–members to join the Section and support its activities. A membership form is available on the SOA Web site. Annual dues are $15.

Issues of the Section newsletters, *Expanding Horizons* and *Conversations*, can be found on the Section page of the SOA Web site. Once a year, the Section will mail its members hard copies of articles published in these newsletters.

Mail alert:
Second Ballot on the way

Second Ballots for the SOA 2001 elections of officers and board members will be mailed to all Fellows on July 3. To be valid, ballots must be received in the Society office no later than August 3. If you are a Fellow and do not receive the Second Ballot mailing by July 17, please contact Lois Chinnock at the Society office (phone: 847/706–3524; fax: 847/706–3599; e–mail: *lchinnock@soa.org*).

Because Fellows have had some questions about the preferential voting process on the Second Ballot for the office of president–elect, the following brief description is offered to shed some light on this subject.

Preferential voting is similar to an election followed by runoffs, if necessary. To win, a candidate must receive a majority of valid votes cast.

First–choice votes are counted initially. If no candidate receives the necessary majority of first–choice votes, the candidate receiving the smallest number of first–choice votes is eliminated. Votes for that candidate are redistributed to the other candidates based on the second–choice preference shown on the ballots. If no one receives a majority after this distribution, the Fellow receiving the smallest number of votes (including the transferred second choices) will be eliminated, and the second and third choices on that candidate's ballots will be distributed between the remaining two candidates.

The winner, one of the two remaining candidates, is the one with the most first–choice votes plus distributed second– and third–choice votes. This is equivalent to an election between the top two candidates, had the other two candidates not been on the ballot at all. Results from previous years show why it is important for Fellows to carefully consider their first–, second–, and third–preference votes for president–elect.

Section elections ballots

Ballots for the Section elections will be mailed the first week in July. Returned ballots must arrive in the SOA office no later than August 3. Section members who do not receive the election mailing by July 18 should contact Lois Chinnock at the SOA office (phone: 847/706–3524; fax: 847/706–3599; e–mail: *lchinnock@soa.org*).

Position available
University of Toronto

The University of Toronto's Department of Statistics invites applications for a tenure–stream position in actuarial science, rank open.

The position is to begin September 1, 2001, or as soon as possible thereafter. Duties will include teaching courses in the actuarial science program at both the undergraduate and graduate level, conducting research in actuarial science, and service to the professional actuarial associations.

Required qualifications are a Ph.D. in actuarial science, statistics, mathematics, or a related area, professional accreditation in the CIA, SOA, or CAS, and an active research program. Salary and rank are commensurate with experience.

Applications review will begin on June 30, 2001 and continue until the position is filled.

Letters of application with curriculum vitae should be sent to:

Professor Nancy Reid
Department of Statistics
University of Toronto
100 St. George Street, 6th Floor
Toronto, Ontario M5S 3G3, Canada
reid@utstat.utoronto.ca

Applicants at the rank of assistant professor should arrange to have three letters of reference sent under separate cover to Professor Reid. Other applicants should include the names of three references with their letters of application.

Information on the actuarial science program and the Department of Statistics at the University of Toronto, is available on the department's Web page at *www.utstat.toronto.edu.*

The University of Toronto is strongly committed to diversity within its community. Applications from visible minority group members, women, aboriginal persons, persons with disabilities, and others who may contribute to further diversification of ideas are especially welcome.

Joint Exam 3 seminar

An eight–day intensive seminar for student actuaries preparing for the SOA/CAS Joint Exam 3 will be held September 29–October 6, 2001 in Austin, Texas.

Dr. James W. Daniel, director of actuarial studies at the University of Texas at Austin, will conduct the seminar. Registration is due by August 19, 2001.

For more seminar information, contact Dr. Daniel by mail (4212 Cat Hollow Drive, Austin, TX 78731–2004), by phone or fax at 512/343–8788. Find details on the Web at *http://www.actuarialseminars.com.*

AERF activity

Anderson Memorial Fellowship

The Actuarial Education and Research Fund has awarded an Anderson Memorial Fellowship to Edoh Afambo, a Ph.D. candidate in the Department of Risk Management and Insurance at Georgia State University.

Afambo, a West African actuary, is focusing his research at Georgia State on building financial and insurance models, taking into account the economic and social context of Africa. Following the completion of his Ph.D., Afambo plans to return to Africa to resume his consulting practice and address the problems facing the financial services industry in West African countries.

The James C. H. Anderson Memorial was established in 1995 by Anderson's friends, colleagues, and admirers to reward excellence in his name and to foster the values he epitomized. The memorial preserves Anderson's memory by rewarding, on an international basis, achievements by individuals in fields related to financial and actuarial matters. The $12,000 fellowship is in recognition of Afambo's past achievements and future ambitions.

Hanson Memorial

The John Hanson Memorial Prize for a paper on the topic of employee benefits is administered by the AERF on behalf of the Conference of Consulting Actuaries (CCA). Robert L. Brown is being awarded the 2000 prize for "Impacts on Economic Security Programs of Rapidly Shifting Demographics." The prize will be presented at the CCA Annual Meeting in San Antonio in October.

Individual Grants awards

As a result of its 2001 Individual Grants competition, AERF has awarded three research grants.

- Thierry Duchesne, University of Toronto, and Etienne Marceau and Helene Cossette, Universite Laval, will study the calculation of insurance premiums using dependent risk models and catastrophe databases. The purpose of this project is to derive systematic methods for calculating insurance premiums when natural disasters induce dependence in the risks. The researchers plan to develop individual and collective risk models, incorporating simulation results and catastrophe archive data. This project is being jointly sponsored by the Casualty Actuarial Society.

- David Scollnik, University of Calgary, will examine how a number of existing and new models for outstanding liabilities (i.e., loss development triangle models) can be implemented in accordance with the principles of Bayesian statistics using Markov chain Monte Carlo simulation methods via the WinBUGS software program.

- Wai–Sum Chan and Albert Wong, University of Hong Kong, have been awarded a grant to study advanced nonlinear time–series techniques that might be useful in building stochastic models for pricing and reserving and to illustrate these techniques so that they will be applicable to practicing actuaries.

Retirement systems

The SOA has contracted with Edward W. Frees of the University of Wisconsin–Madison to prepare a database from contributed data and complete the analysis for the Pension Plan Turnover Data Base and Table Construction project. If your firm has not yet contributed data, please contact Julie Rogers *(jrogers@soa.org)* for information on how to contribute.

Finance

The SOA has contracted with Yvonne Chueh of the University of Wisconsin–Eau Claire to conduct a project on asset marketability and liquidity analysis.

CKER update

The Committee on Knowledge Extension Research (CKER) has awarded two grants in conjunction with the 2001 Individual Grants Competition:

Survey of Bayesian Mortality Data Models with related Robust and Nonparametric Extensions—Professors Manuel Mendoza and N. D. Shyamal Kumar of the Instituto Tecnológico Autónomo de México (ITAM), Mexico City, proposed to survey Bayesian models for mortality data and related frequentist models. The project is expected to result in a paper submitted to the NAAJ and a monograph.

Application of Financial Services Risk Management Techniques to Problems of Environmentally Sustainable Economics—Michelle Smith, FIAA, ASA of Tillinghast–Towers Perrin, Atlanta, and Dr. Andrew Leung, FIAA, FIA of Towers Perrin, Melbourne, Australia, proposed to adapt risk management techniques widely used in the financial services sector to develop theoretical tools to assist in environmental management. The project is expected to result in papers submitted to the NAAJ and to an environmental journal, in addition to presentations at several conferences.

Upon completion, CKER will announce the availability of the research results.

ASOP alert

The second exposure draft of the proposed Actuarial Standard of Practice (ASOP) on actuarial communications is on its way to you for your comment. The ASB urges you to read this important standard carefully, think about how it would affect your work, and send your suggestions to the committee.

dear editor

What about Europe?

I was a little disappointed with the April edition of *The Actuary*. It focused on convergence in the financial services industry and yet made only one passing reference to Europe.

Surely students of convergence should be looking across the pond for guidance. In Germany, Belgium, France, the Netherlands, and elsewhere in Europe, the process of integrating bank and insurance has been evolving for decades. Distribution, asset/liability risk analysis, asset management and product development have all been successfully integrated.

One broad (albeit admittedly rough) measure of the success of the European model over the U.S. model is investor perception. With the notable exception of AIG, most European bancassureurs have higher market capitalizations and P/E ratios than their North American counterparts.

In my judgment, any analysis of how the United States should proceed in achieving financial convergence should borrow heavily from the European experience. The bumps along the road are many, and Europeans have been driving along it for much longer.

Eugene Dimitriou

Associate Editor Godfrey Perrott responds:

Mr. Dimitriou makes a good point that convergence between banks and insurance companies is further advanced in Europe than it is in the United States (since, among other things, it was illegal in the U.S. until recently).

I would not, however, be so quick to draw a conclusion based on the different P/E ratios in different countries about the merits of different national financial service company models. Citigroup is the only U.S. merged bank and insurance company of any size, and it is still sorting out its merger. Differences in tax and regulation between different countries can have a significant effect on investors' appetite for stock and, hence, P/E ratios.

We are considering a follow–up article in a future issue of *The Actuary* on convergence of financial services in Europe.

Text bridges actuarial, business studies

I want to share with actuaries some observations on the *Financial Economics* textbook. I have read most of this book and feel that this text bridges a huge gap between the actuarial world and graduate study in business.

My educational background includes undergraduate work in finance and actuarial science at the University of Wisconsin, Madison. I received my ASA in 1992 and decided to get an MBA in analytic finance at the University of Chicago in 1996. Having seen (and lived) some of the actuarial syllabus and then studying options and fixed income pricing courses at the graduate level, this book put it all together for me. The authors have an elegant way of dealing with complicated math.

My experience in graduate school was that MBA courses had so much to cover and so broad an audience that they could not effectively cover a lot of the mathematical details in the time allotted. When I received the *Financial Economics* book, I realized that it built a solid bridge between what I had learned in actuarial science and what I had learned in the MBA program.

I want to congratulate Professor Harry Panjer and the team of authors who worked together. I believe *Financial Economics* can help open doors for actuaries in applied finance as the banking and insurance industry continues to change in the new regulatory environment.

I expect insurance companies to expand more into the financial arena. The best example of this is Travelers taking over Citibank recently. In these new mega–banks, the lines between long–term financial planning, finance, and markets will be expanded to offer additional opportunities to the actuarial community. Having a text that will allow actuaries to communicate in economic terms on their issues will broaden the audience significantly.

Robert Yafchak

Clarification

"Actuarial employment in 2001," an article in the March 2001 issue of *The Actuary,* included a list of some large actuarial employers. As the article's author, I was contacted about other major employers who were not listed, specifically Buck Consultants and Manufacturers Life Insurance Company. Both of these companies—and probably others as well—employ more actuaries than some of those listed.

The point of the examples cited in the article was not to identify the largest companies, but rather to show the relative size of large consulting firms vs. insurance companies as employers of actuaries.

Anna Rappaport
Associate Editor