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Participating life insurance—R.I.P.?

by Kevin Wark

Since the introduction of universal life (UL) in the early 1980s, it has grown to be the dominant form of permanent life insurance coverage in North America. According to statistics from the Life Insurance Marketing and Research Association (LIMRA), in 2001, UL accounted for 52 percent of all new life insurance premium sold in the United States and 66 percent of sales in Canada.

However, more recently, we have seen the trend shifting back to participating (par) life insurance. This article will highlight the reasons for the original shift to UL and the renewed popularity of participating life insurance.

The age of participating life insurance

Before the 1980s, par life insurance was the dominant form of permanent protection in North America. In Canada, this trend was partly attributable to the makeup of the industry, in that the major companies—ManuLife, Canada Life, Sun and Mutual Life (now Clarica)—were mutual companies with career agency systems trained to promote par products. And London Life, while not a mutual, was also a career agency company with a very strong par influence.

Two essential features distinguished these products from other permanent insurance policies at that time. First, the premiums were determined using very conservative assumptions regarding investment returns, mortality and administrative expenses. To the extent the insurance company outperformed these assumptions, policyholders benefited in the form of dividend payments. Second, a participating policyholder was a part owner of the insurance company and, as a group, controlled the insurance company in theory.

During the course of the 1980s and 1990s, several important events occurred to break the stranglehold of participating life insurance. In the early 1980s, North America experienced unprecedented increases in short- and mid-term interest rates. Participating life insurance could not take advantage of these higher returns because of having a majority of investments in longer-term bonds. To prevent a major outflow of funds to other competing financial instruments, the more innovative insurance companies created "new money" products, including UL.

Rather than jump on the UL bandwagon, many par sellers increased their dividend scales and looked at more innovative ways to use dividends to reduce the costs of the insurance coverage and/or allow the policyholder to cease paying premiums in the future.

The career agents, seeing new competition from UL policies (which they were prevented from selling), moved aggressively to promote the higher dividend scales as a way to reduce premiums in the future. Unfortunately, as interest rates fell back to historical levels, the insurance companies had to reduce their dividend payments.

This, in turn, led to lawsuits against agents and insurance companies when policyholders discovered that their policies would not live up to the original illustrations provided to them. The media picked up on this "disappearing premium" debacle, which further served to dampen participating life insurance sales.

With the decline in interest rates in the mid-1980s, it appeared that UL policies would lose a significant advantage over participating life insurance.

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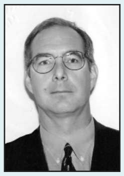

Steven Prince
Editor responsible for this issue

Fair but not equal? Equal but not fair?

What is a "fair value" of insurance liabilities?

by Steven Prince

Many readers of this publication are aware of the work of the International Accounting Standards Board as it tries to develop a consistent set of accounting rules by which companies will report their financial results.

One of the topics of debate concerns the proposal that insurance liabilities be measured on a fair value basis. The concept of fair value is to value liabilities at what they would be worth to someone else. Fair value is related to, but not the same as, market value. The point I am making here applies to either.

There are many cases where market value makes a lot of sense. What is my car worth? What is this stock worth? If there is a ready market for a product, a "market value" has meaning. The market value is what you could probably sell the item in question for.

Whether you would sell it for that price is another question. The car might have a lot of memories. You might have a hunch about a particular stock. To value an item at market price is not to suggest there is no other dimension of worth, but simply to say, "This is the going rate."

The trouble with applying this to insurance liabilities is there isn't a going rate. What would it cost to have another company take over some liabilities? Any actuary who has been involved in valuing an insurance company or valuing liabilities knows how difficult it is to determine this.

"Going rates" for mortality are meaningless. Companies have very real differences in mortality experience for all kinds of reasons related to their sales, their underwriting, their marketing, their policy provisions and so forth. Same thing for lapse rates. Same thing for operating expenses. And so on. Why would anyone want to ignore those differences if they were buying a company?

The answer is, they wouldn't. So why, in valuing a liabilities of a company, would anyone want to ignore those very differences? I think the answer has to be, again, they wouldn't.

I think it would be "fair" to value liabilities at what a company expects to pay out over the course of time in settling those liabilities. In financial reporting circles, this is known as an "entity specific" value, that is, a value based on company circumstances.

If another company—a potential buyer—thought it could do it for less (or more), it might attach a different value to those liabilities. This would be known as a "market price." Or, it would be a market price if you took several companies' views of those liabilities and made some overall assessment thereof.

But I don't see how it helps normal users of financial statements to attach a value to the liabilities based on what it would cost someone else to pay them. If it's going to cost me $100 to do something, why would I report that liability at $80 just because other people can do it for that price? What would be fair about not reporting the $20 I expect to lose on the process?

Proponents of fair value reporting say that fair or market value reporting improves a reader's understanding of the company's financial situation by making numbers comparable between companies.

I think it obscures real information about a company that a reader of those financial statements would want to know.

Steven Prince is a consulting actuary based in Toronto and a member of one of working committees on the IASB deliberations. Views expressed here are his own. He can be reached at StevenP@dion-durrell.com.

Let's be careful about the future of SOA elections

This letter is written in response to Robert L. Brown's article, “Who will be nominees in 2003?” (November 2002), and as a comment on the 2002 elections. My information on the elections is based on my own experiences, what I was able to find on the Web site and the recent Elections Committee Report to the SOA Board of Governors.

As a past-president of the SOA, I am also a past chair of the Elections Committee. In my 14 years on the SOA Board, I have seen many leaders come and go.

I understand that the SOA is about to conduct a study of its governance process, and included in it is a study of elections. A likely issue in this study is how open and inclusive the process for choosing future leaders will be. Brown’s article documents changes from the past that make the process less open, but still provide for considerable membership choice.

I want to provide input into that study and am doing it in a public way in the hope that others will follow suit. My comments are as follows:

- The percentage of members voting dropped markedly in 2002 with the new electronic voting procedures. I believe that this is not a sign of apathy, but rather reflects the fact that the new procedures were cumbersome and the election material was awkward to access. I, personally, was never able to get the election materials to print and found them very awkward to use while voting.

- Underrepresentation of pension actuaries has been a problem for many years. It continues to be a problem. Much to my distress, the difficulty in accessing election materials made it much harder to see what the situation with regard to practice representation was at the time I voted. I have not been able to locate any report to the membership on election results other than who won. The report to the Board on the election did not even include practice representation.

- There was no report on geographic representation either, and this has also been a historic concern.

- There has been considerable tension among leaders of the profession in the last few years over the issue of democratic elections versus a single slate or a small slate. The tradition in the SOA of democratic elections is different from most associations, but valued by many SOA members. This is an important issue to SOA members and members must have a chance for input before any change is made.

- Those who want a single slate say they want proven leaders. At least in part, this seems to me to be a code word for choosing people who agree with them on their positions. It can be a way of stifling dissent. We need to value and reward dissent rather than looking for those who will not challenge our way of thinking. In my 14 years on the Board, those who challenged the leadership opened up the discussion. In a few cases, they also changed the outcome. They were invaluable.

I want to express my dissatisfaction with the 2002 election process and make sure that members are given a chance to participate as further change is considered. The views expressed in this letter are solely the individual views of the writer.

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Important cost factors overlooked?

“Silver bullets for outpatient cost increases?” by Bruce Pyenson, Patricia Zenner and Pang Chye (November 2002), was an interesting and informative article. However, I feel that some important factors affecting the outpatient cost have not been taken into account in the study. I would like to discuss some of them, which might have contributed to the outpatient cost.

- Population aging: Population aging increases not only the number of persons availing themselves of outpatient services but also the frequency of the services, since older people utilize such services more frequently than young ones do.

- Supply of physicians: Generally, the greater the supply of physicians the greater the utilization. The unit cost may decrease if the supply of physicians increases due to competitive reasons. The final impact on outpatient cost could be in either direction but more likely to increase, as the unit cost is generally not affected heavily from the supply.

- Unit cost per service: Utilization can decrease if unit cost increases, and the impact on total outpatient cost could be in either direction.

- Inflation: Both general as well as health inflation.

- Health care providing system: Managed care or indemnity or hybrid.

- Geographical distribution of the outpatient cost.

- Income: Increase in income can increase both the utilization as well as the unit cost.

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Participating life insurance—R.I.P.?

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However, those insurance companies marketing these products foresaw the growth of the equity markets and added investment accounts linked to the popular stock market indices such as the Toronto Stock Exchange 300 and Standard & Poor's 500.

More aggressive companies created their own indices and linked the credited rate to the returns of popular mutual funds. This allowed the insurance company and broker to support the illustration of higher returns, even after factoring the high management expense ratios (MERs) built into these types of accounts.

With the movement into equity-linked investments, new types of distribution channels—including financial planning organizations and mutual fund dealerships—became interested in marketing UL policies. They heavily promoted the product as a tax-deferred investment vehicle with "ancillary" estate planning benefits. This expanded the distribution of UL products and fueled continued growth in market share.

Perhaps the final "nail" in the participating life coffin (before its recent rebirth) was the demutualization of the large mutual companies in Canada. This led to the de-emphasis of participating life insurance because it now no longer represented sole ownership of the life insurance company.

In addition, in their drive to become more profitable, most of the mutual companies jettisoned their career agency systems. These agents were forced to join the brokerage system, a system that was, for the most part, focused on the sale of UL products.

However, despite these various blows to the sale of participating life insurance, LIMRA found that it still represented 25 percent of all new life insurance premium in the United States and 13 percent of sales in Canada at the end of 2001. And, as of September 2002, its market share was up to 26 percent in the United States and 17 percent in Canada. At the same time, UL sales have slowed, decreasing from 52 percent to 50 percent in the United States and from 64 percent to 57 percent in Canada.

The rebirth of participating life insurance

The root cause of the drop in UL sales and attendant increase in participating life insurance is the current state of the stock markets. The exuberance of the late 1990s has been replaced with the cynicism of the 2000s. The high-tech blowout, lower corporate profitability, accounting scandals and increasing incidents of terrorism all have resulted in two years of double-digit market declines.

Those UL policyholders that were heavily invested in equity-linked investment accounts have, in most cases, seen an overall decline in their policy cash values. The high MERs associated with equity-linked investments can no longer be ignored because they serve as a further drag against the earnings of the policy.

Some financial media have jumped on the "anti-UL" bandwagon, as they did when policyholders started to complain about "disappearing premiums." The newer distribution channels (IDA firms, financial planners), already coping with unhappy stock market investors, have retreated from the sale of UL policies.

In contrast, the remnants of the career agency system live on and are beginning to flourish at companies such as Clarica and London Life. They never totally abandoned their roots in participating life insurance and have strengthened their distribution systems through acquisitions and the addition of new product lines via corporate agency agreements.

The conservative bond portfolio underlying participating life insurance also has shown its worth over the past two years. Dividend payouts on participating life insurance remain strong, showing annual returns in the 7-8 percent range. This competes very effectively with a negative growth stock market and long-term interest rates in the range of 4-5 percent.

Another underlying problem is that UL policies have become increasingly complex as companies try to distinguish their products from others in the marketplace. The relative simplicity of participating life insurance, once considered a negative because of its lack of flexibility, is now considered a strength by those agents who are new to the industry or cannot keep up with the plethora of new products.

Also, the recent pricing increases for guaranteed level cost of insurance UL products have forced brokers who are sold on this type of insurance cost structure to look elsewhere, including to participating life insurance.

Where will it end?

Will the rush to participating life insurance become a stampede? This is unlikely, for a number of reasons. First, the equity markets will recover and, while they may not reach their former glory years, will provide steadier and healthier returns to policyholders.

In addition, many insurance companies have a vested stake in the continued growth of their UL policies and will make the required changes to deal with the renewed competition from participating policies. We have already seen companies come out with "low-MER" UL to combat the criticism that these products are too expensive. Also, many companies are seeking to simplify their UL products to address the concern that they are too complex for the general consumer (and many insurance advisors).

The reality is that both participating and UL insurance have their place in the industry, with obvious strengths and weaknesses. It is up to the advisers to determine the needs of their clients and then select the appropriate product to meet those needs. For many consumers seeking risk avoidance and diversification, the best answer may be to own both types of products to cover their insurance and investment needs.

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Is par making a comeback?

Participating (par) life insurance sales have been increasing of late. To get a second perspective on this topic, The Actuary spoke to Rick Hampton, FSA, FCIA, director of product development and pricing for London Life Insurance Co., one of the largest writers of par life insurance in Canada.

Is your company "committed to par"?

Hampton: We are committed to par, but as one important part of a complete portfolio of financial security planning products that we offer. From a corporate perspective, we don't recommend or prefer one product type over another. We believe it is important that our financial security advisers have a complete range of product solutions to offer their clients, which includes term insurance, universal life and participating whole life.

In what cases would par be a good choice for customers?

Hampton: Par life insurance is the product of choice for people who need permanent coverage but for whom simplicity is more important than flexibility. They want to leave the day-to-day management of their policy to a team of professionals. They prefer to take investment risks outside their life insurance policy. Even during times of rapid economic change and volatility, our par account yields have been relatively stable compared to many financial instruments.

Another important feature of par policies is that the policyowners receive the benefit of mortality improvement achieved through prudent selection of underwriting risks and general improvement in mortality rates. This benefit often gets overlooked.

The death of par has been predicted many times in the past. Yet it bounces back. Do you think par will continue to be popular when the current investment climate changes, as it always does eventually?

Hampton: Yes, we believe that par life insurance will continue to be popular. In Canada, universal life (UL) gained popularity in the late '80s and early '90s during a period of growth in the equity markets. The recent turbulent markets have clients experiencing the impact of market volatility on UL values. This may temper their view of UL and show the value that par insurance provides. Individuals who thought they would be comfortable with the risks associated with equity-linked investments in UL may find they are more comfortable with a product that is more conservative and stable. Par fits this need.

Some people—customers and many agents—complain that par would be easier to sell if the dividend process were more transparent. Do you agree? If so, what might be done to make it more transparent?

Hampton: We took concerns about lack of transparency seriously and did something about it. We conducted market research, including focus groups of potential and existing clients and financial security advisers.

The result was the development of two complementary publications designed for individuals who are interested in par insurance.

The primary publication is a glossy booklet that provides a high-level general understanding of the basics of the par business. This document was designed for both new sales situations and for existing customers who have had their par policies for a number of years.

The second publication is designed for a technical audience who wants a deeper understanding of the technical aspects of par insurance. The straightforward factual presentation is targeted toward the large-case sophisticated market where the client's own professional advisers may be involved in the purchase decision. This is the market where our par sales are growing.

Do you think policyowners would understand their dividends better if the dividend statement looked more like the performance summaries they get from the mutual fund companies?

Hampton: We firmly believe that life insurance products should be purchased to offset a potential loss, for example, if a breadwinner, business owner or key employee dies unexpectedly. Cash values provide an added benefit but we do not promote insurance as an investment vehicle. An annual statement should clearly outline the features and benefits of the product in question, not some other product.

One of the "perceived weaknesses" of participating whole life used to be that it was less flexible than the average UL policy. Some companies responded by making their par products more flexible. Some responded by touting the "simplicity" of par compared to UL. How would you characterize your company's product?

Hampton: We believe that par, by its nature, is a simpler product. For example, the par investment account is managed by investment professionals so the client doesn't have to. In terms of flexibility, we did add a feature to our par products that allows for additional premiums and offers tax management features.

Rick Hampton is based in London, Ont. He can be reached at rick.hampton@londonlife.com.

Ireland: A center for EU life

Ireland has more to offer than golf and Guinness

by Michael Daly

Ireland has become an increasingly important base for insurance companies wanting to sell life and savings products into other European Union (EU) locations. Business is substantial by any measure: Irish-based international life insurance accounted for £5.3 billion of new business premium in 2000. The market has expanded steadily since then and growth is predicted to continue.

In 2002, PricewaterhouseCoopers carried out a survey in conjunction with Financial Services Irelandto look at how current cross-border operators in Ireland view the market. Seventeen insurers responded to the survey, accounting for almost 80 percent of the market by new business premium. The findings give insight into the advantages of Ireland as an international base, the current dynamics of the market and the likely prospects going forward.

Why Ireland?

Four common themes emerged as key factors that enabled respondents to develop their international life insurance businesses:

1. Flexibility of Irish regulatory authorities. The Department of Enterprise, Trade & Employment (DETE) has made great efforts to promote Ireland as a center for international life insurance business. The Irish regulatory authorities are familiar with cross-border markets and have a constructive attitude toward the development of this business. Regulatory approval is fast—authorization can take as little as seven months from submission of the business plan.

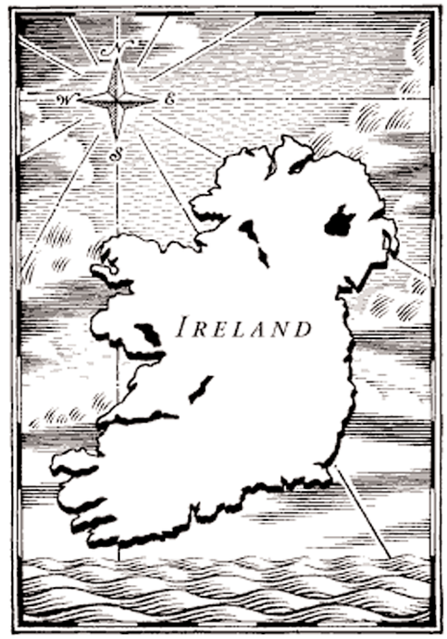
2. Innovative product development skills. Companies operating within the international life sector pride themselves on their ability to offer innovative products specifically tailored to clients looking for sophisticated financial management tools. The regulatory authorities and the actuarial profession work together closely and cooperatively, which gives companies a high degree of freedom to develop innovative products. This contrasts with a typically more restrictive regulatory environment in other European countries.

3. Availability of staff with the requisite expertise in Ireland. Irish companies have more than 30 years of experience selling unit-linked products. There is a strong domestic pool of insurance professionals available at historically lower cost than in the United Kingdom or many other European locations. Furthermore, there is an established network of professional services firms located in Dublin, providing actuarial, accounting, taxation and legal services to both the international and domestic insurance industry.

4. Irish taxation policy. Perhaps surprisingly, only a small majority of respondents identified Irish taxation policy as a significant contributing factor in the development of their business. While the tax environment is favorable, the advantage was generally not the dominant factor in the decision to base operations in Ireland.

Is Ireland a low-cost jurisdiction?

More than half of the survey respondents felt that the cost of operating in Ireland was lower than operating in the domicile of their parent. Interestingly, a high proportion of respondents felt that this would continue, despite recent high inflation in Ireland. Twelve respondents believed that Ireland currently was, and



would remain, a less expensive operating location than Luxembourg, another center of European cross-border life insurance.

Freedom of Services or Freedom of Establishment?

There are currently two approaches by which companies with their head office in one EU location can transact business in another EU location: One is “Freedom of Services” and the other is “Freedom of Establishment.”

To explain the main differences, suppose a hypothetical company “EU Financial Services” (EUFS) wishes to write life insurance business in Italy from offshore in Ireland.

Under the Freedom of Services approach, EUFS sets up an office in Dublin as an Irish corporate entity and needs have no physical presence in Italy. The Irish regulator is responsible for monitoring solvency of EUFS, and there is no taxable presence in Italy. The Italian regulator is responsible for ensuring that EUFS complies with the Italian "general good" requirements with respect to treatment of policyholders.

Under the Freedom of Establishment approach, EUFS, as a corporate entity of Ireland, sets up a branch in Italy and the Irish regulator is responsible for supervision of the branch. This gives rise to a taxable presence in Italy.

The vast majority of survey respondents currently transact business solely on a Freedom of Services basis. However, some companies transact business on a Freedom of Services basis in one state and on a Freedom of Establishment basis in another.

Market size

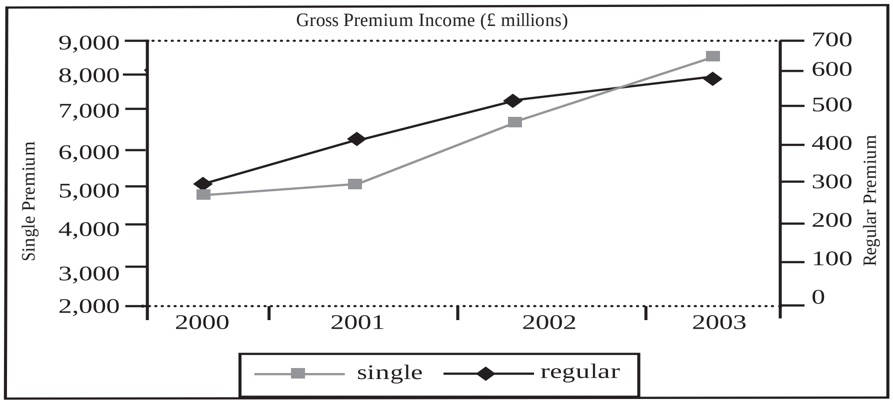
As mentioned previously, foreign risk life business written from Ireland accounted for new business premiums of £5.3 billion in year 2000, according to DETE. Funds under management of Irish cross-border life insurance companies were of the order of £10 billion at the end of 2000.

Based on survey responses and estimates for nonrespondents, the Irish cross-border life insurance sector is anticipated to grow significantly, with new business premium income reaching £8.9 billion (see Figure 1) and funds under management at £18.2 billion (see Table 1) by Dec. 31, 2003.

Products

Unsurprisingly, single-premium unit-linked savings products dominate the market. Of the £8.9 billion expected new premium, £8.0 billion would be for unit-linked business and £0.9 billion for nonlinked business (see Figure 2 on page 8).

Figure 1



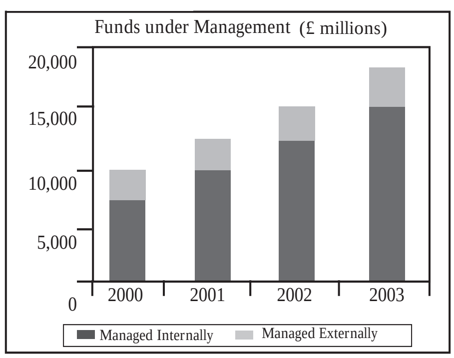
Source: PwC/Financial Services Ireland (2002)

In addition to traditional single-premium unit-linked savings products, a number of companies write tracker business, especially those whose primary focus is on the Italian market.

In the nonlinked market, payment protection business has increased in popularity, particularly products sold to U.K. residents. Few respondents currently offer pension products, but a number of companies are planning to launch them in the near future—those in Germany and Italy, in particular (to take advantage of the Riester reforms).

Distribution

Table 1



Source: PwC/Financial Services Ireland (2002)

The most popular primary distribution channel of respondents was the bank branch network of the parent company. Bank distribution was used by seven of the 17 respondents, yet it accounts for 65 percent of the premium volumes. Brokers/IFAs were used by six respondents, but account for only 33 percent of premiums. And agents were used by three companies, yet account for only 2 percent of premiums.

Which markets?

The vast majority of Irish-based international life insurance companies transact business with policyholders resident in a single EU state, which generally is the domicile of their parent company. Based on the survey results, Italy is the most significant host market representing nine of 17 respondents, followed by the United Kingdom with seven (see Table 2 on page 8).

The future?

As the survey shows, Ireland is already well positioned as a result of favorable regulatory and taxation regimes, a developed unit-linked infrastructure and ready access to expert resources. These factors will continue to fuel activity, but the market is likely to be given an extra boost by several external factors:

- Impending EU directives on insurance intermediaries and distance selling.

Ireland: A center for EU life

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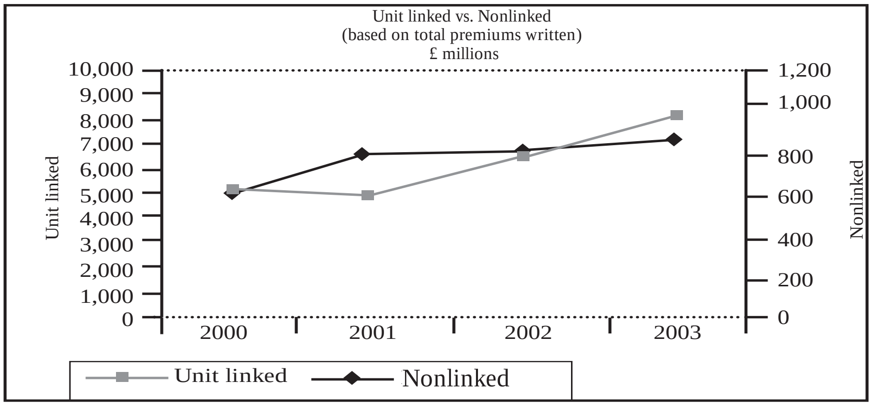
Figure 2



Source: PwC/Financial Services Ireland (2002)

- Expansion of the EU from 15 to as many as 27 countries as a result of the Treaty of Nice.
- Pension opportunities in Germany and the longer-term desire for a single European pension market.
- Continued demand for unit-linked exposure, fueled by low interest rates across Europe.
- Growing interest from North American insurers to diversify into Europe.

For companies wishing to access European life insurance markets from a single location, it is definitely worth putting up with the hardships of green fairways and smooth beer.

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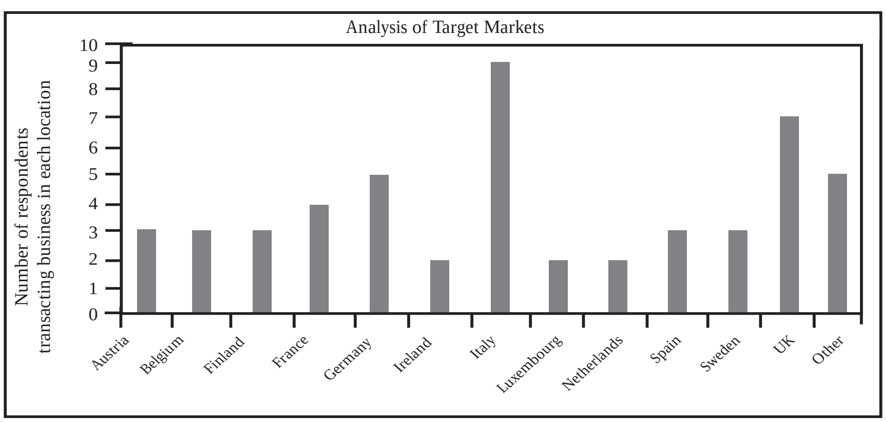
Table 2



Source: PwC/Financial Services Ireland (2002)

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Being uncooperative again

by Andrew Smith

In 1994 the Bank of Sweden Prize in economic sciences in memory of Alfred Nobel was awarded to John Harsanyi, to John Nash, and to Reinhard Selten, for their pioneering analysis of equilibria in the theory of non-cooperative games. This theory includes situations such as the competitive tender.

Subsequently, John Nash found himself the focus of some media interest. John Nash's biography became a best seller in 1998 and a film based on the book has won four Oscars. The popular interest was largely due to his tragic personal circumstances. In 1958, on the threshold of his career, paranoid schizophrenia struck. Nash lost his job at MIT in 1959 and was virtually incapacitated by the disease for the next three decades. He then staged a remarkable recovery, and now works once more at Princeton University.

Here is an example of the kind of problem Nash considered. Three firms are invited to submit sealed bids to make a widget. Each firm has a different cost of production, with the first costing \$1, the second \$2, and the third \$3. They each submit a bid, and the contract is awarded to the lowest bidder. You are advising player 2—how much do you suggest they should bid?

What is a Nash equilibrium?

A Nash equilibrium describes a set of strategies for players in a non-cooperative game. The game's equilibrium holds when each player's strategy is a pay-off-maximising response to the strategies pursued by the other players. This concept has been the point of departure for most economic work in the field of game theory.

Nash's key contribution was a mathematical proof that, for finite games, a Nash equilibrium exists. The proof itself is only a few pages long, but it relies on a deep topological result—the fixed-point theorem proved by the Japanese mathematician Kakutani. There are a number of complexities to applying this in practice, including the problem of multiple equilibria and the strong economic assumption that a game's participants are aware of each other's constraints and preferences. The other Nobel winners have contributed to resolving these issues.

Mixed strategies

A player follows a mixed strategy if a random selection is made between various alternatives. Nash equilibria may involve mixed strategies, even when no deterministic equilibrium exists.

Consider our auction example. Player 2 will only rationally bid more than the production cost of \$2, and player 3 will only rationally bid more than \$3. If player 1 was aware of the other players' strategies, they could immediately win the auction and make a profit of at least \$1 by bidding one cent below the cheaper of the other two. From player 1's perspective, this is plainly an optimal strategy.

To confound this activity, players 2 and 3 could choose their strategies randomly. In other words, each could choose their bid from a suitable probability distribution. The purpose of these random choices is not directly to maximise their own profit, but instead to confound player 1's effort to undercut. By making random bids, players 2 and 3 gain the chance that player 1 will be too greedy, enabling either players 2 or 3 to undercut while still taking a profit.

The auction—analysis

Let us now return to our auction example and examine a Nash equilibrium. Each supplier chooses a random bid independently of the other players. All bids are in excess of \$5; the amount of the first player's bid is a random sample from a distribution with cumulative distribution $F_1(x)$, where

$$F_1(x) = P\{\text{bid} \le x\} = \begin{cases} 0 & x \le 5 \\ 1 - \sqrt{\dfrac{3(x-1)}{2(x-2)(x-3)}} & x \ge 5 \end{cases}$$

The other players follow similar strategies, with distribution functions as follows (these apply on $x \ge 5$, the functions are zero below this):

$$F_2(x) = 1 - \sqrt{\frac{8(x-2)}{3(x-1)(x-3)}}$$

$$F_3(x) = 1 - \sqrt{\frac{6(x-3)}{(x-1)(x-2)}}$$

From charts of these curves (see Figure 1 on page 10), we can see that player 3, with the higher unit cost, is likely to quote a larger bid. This is not necessarily a losing bid, as all players select their bids randomly, so even with a very large bid player 3 may get lucky.

How can we verify that these strategies together constitute an equilibrium? We need to demonstrate that no player can improve their expected pay-off given the strategies of the other two players.

So let us look at player 2's strategy. If x is played, then there is a probability of $[1-F_1(x)][1-F_3(x)]$ that the other players both bid a higher value. In this case, the gain to player 2 is $x-2$, otherwise the gain is zero. The expected gain to player 2 is then

$$\begin{aligned} & [x-2][1-F_1(x)][1-F_3(x)] \\ &= (x-2) \cdot \sqrt{\frac{6(x-3)}{(x-1)(x-2)}} \cdot \sqrt{\frac{3(x-1)}{2(x-2)(x-3)}} \\ &= 3 \end{aligned}$$

In other words, given the strategies of players 1 and 3, player 2 is indifferent between all bids $x \ge 5$, and in particular, the equilibrium mixed strategy is no worse than the alternative deterministic ones. Indeed, this is how I derived the distribution function. Players 1 and 3 have done a great job in confounding player 2, neutralising any effort on player 2's part to exploit known competitor strategies. Similar results apply from the perspectives of each of the other players.

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Being uncooperative again

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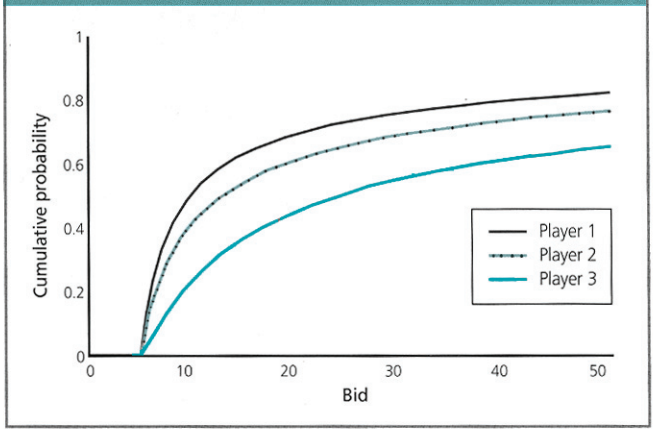
Figure 1 Distribution of optimal strategies in the auction



This is not, however, the unique Nash equilibrium for this problem. You could vary the solution by looking at other minimum bids, higher or lower than the $5 I have shown here. There is a much simpler equilibrium where player 1 bids $2, and the other players bid marginally above that. Game theory tells us little about which of these equilibria we should expect to see in practice.

Does it work?

The relevance of Nash equilibria to modern economic practice is still controversial. Perhaps the most promising area is the design of auctions. These auctions can be long and protracted affairs. In April 2000, the U.K. government announced the results of its own airwave auction: after 150 rounds, the accepted bids totalled £22,470m.

This proved to be the high point of the telecom auction frenzy. Does game theory deserve the credit for Gordon Brown's windfall? Or were the fluctuations simply reflecting the boom and subsequent collapse in the fortunes of telecom companies? I have carried out some tests of a simple auction game, both within my own office and in a workshop at the general insurance convention. I chose a problem with a unique Nash equilibrium, in which each player has a deterministic strategy. In the office, my colleagues quickly converged to Nash equilibrium behaviour, while general insurance volunteers probed a wider range of strategies. By the time you read this article, life actuaries will also have had the chance to try this game.

Much as I would like it to be true, I would hesitate to conclude from this that my colleagues are smarter than other actuaries. Instead, these experiments show that Nash equilibria for simple games are not necessarily predictive of actual outcomes. This could be because the players fail to conform to game-theoretical definitions of rationality.

Equally well, it is possible that my formulation of the game has failed to capture actual players' real objectives. The workshop had a Have I Got News for You air about it—players may have tried harder to entertain the audience than to win the game. In our auction example, there may well be a price above which the auctioneer will abort, choosing instead to negotiate privately with player 1—in which case different optimal bidding strategies emerge.

The difficulty of formulating even simple problems in a game-theoretic framework is serious. There are many parameters to estimate to formulate the problem, most of which relate to hypothetical pay-offs under strategies, which have not in the past been followed—so for which no supporting data is available. Controlling the external incentives in laboratory type tests is close to impossible. On top of this, Nash's equilibrium theorem is merely an existence result, which gives us no guidance on how to characterise numerically the set of Nash equilibria.

Actuarial applications?

Are Nash equilibria ever going to be of practical use to actuaries? Is this a fast developing area where actuaries must work hard to catch up, or is game theory a peripheral discipline which most of us can leave to the specialists?

In 1959 the late U.K. actuary Sidney Benjamin published one of the few attempts to apply this literature in an actuarial context—in this case to a minimax definition of prudent valuation bases. Others have claimed to apply game theory to life insurance underwriting, market volatility forecasting, timing of market sales and purchases, capital allocation, insurance premium cycles and even the management of terrorism risk.

In all of this, I am not aware of a single example where a manager has sought to calibrate his own and competitors' pay-offs and then successfully forecasted the future by solving for a Nash equilibrium. Instead, most claimed applications of game theory involve ideas, concepts or insights used in a judgmental fashion. A cynic might question whether game theory is actually being applied at all. Claims to use Nash equilibria may turn out to be the structured application of general reasoning, given a veneer of sophistication by the adoption of a Nobel-winning name.

Game theory is still developing rapidly. It holds out a promise—as yet unfulfilled—of explaining puzzling effects in insurance and capital markets. Actuaries should keep abreast of developments, and be ready to adopt game theoretic tools as they become more practical to apply.

This article has been reprinted from the December 2002 issue of The Actuary, a publication of the London-based Staple Inn Actuarial Foundation, www.the-actuary.org.uk. This is the first of what appears to be a very interesting series describing the work of key economists from the last century. Andrew Smith is with B&W Deloitte.

An interview with actuary-turned-novelist Ardian Gill

by Peter Hutchings

The River is Mine, by Ardian Gill, is a handsome new novel recreating John Wesley Powell's 1869 exploration of the Green and Colorado rivers and the Grand Canyon. Fellow actuaries with an interest in an action story, in the American West, rivers in general or these rivers in particular are well advised to get a copy (available for $12.95 from Amazon, Barnes and Noble or www.locolcolorpress.com.)

Considering the number of actual authors and might-someday-be authors among our readership, I recently interviewed Gill, president of Gill & Roeser Life Intermediaries Inc., New York, about the project.

How did you decide to write a novel?

Gill: I was always at home with words and numbers equally. I attempted a novel once before while working for a large insurance company in the mid-1970s; this mystery story, fortunately lost, dealt with a defrocked actuary and could not find a publisher. When novel writing proved incompatible with my new consulting career, I decided to defer the project. Part of my retirement planning was to look for something that was creative, something I could do anyplace in the world, and something I could do all my life. This approach tracked my consulting emphasis on long-term planning, and writing and photography were the areas that emerged.

How did you train for novel writing?

Gill: Well, I read a lot. But also I took several courses; the most influential was a screenplay course taught by an screen-writer named McKee who, coincidentally, appears in the movie About Schmidt, whose main character is an actuary. Screenplay writing requires structuring a story with an eye to visual impact, which I tried do in The River Is Mine. Another useful course was "Making the Novel Happen," by Meredith Sue Willis at New York University. Finally, I also benefited by a writers and artists in residence program in Patzcuaro, Mexico.

How did you choose your topic?

Gill: Powell's 1869 voyage through the Grand Canyon had been in my mind since the seventh grade; a picture of a tiny boat nestled in a bend of the Colorado River has stayed in my mind ever since. As an adult, I have taken two dory trips, one raft trip and a hiking trip in these areas. While the construction of Lake Powell and several dams have shortened the river from Powell's day, one can still experience the rapid rise of water that added so much danger to his trip—although today's guides know every bend and rock.

Why did you create the novel from the point of view of one crewman?

Gill: My research included reading Powell, Stegner and other easily available sources, but it was my encounter with the diary of a crewmember that shaped the novel. Powell's and, to some extent, Stegner's versions are, of course, quite poetic, but I felt that the story deserved to be told from another point of view. And, as we all know, the view from below is unflattering. When I found corroborating sources to the crewmember's diary, my course was set.

Which parts of the task did you find the hardest and the easiest?

Gill: I felt like a judge in court when presented with widely different views of the same event. Deciding which version was most credible was frequently very difficult. On the other hand, the scenery that Powell and his crew went through is just as exciting now as then, and describing it came naturally to me.

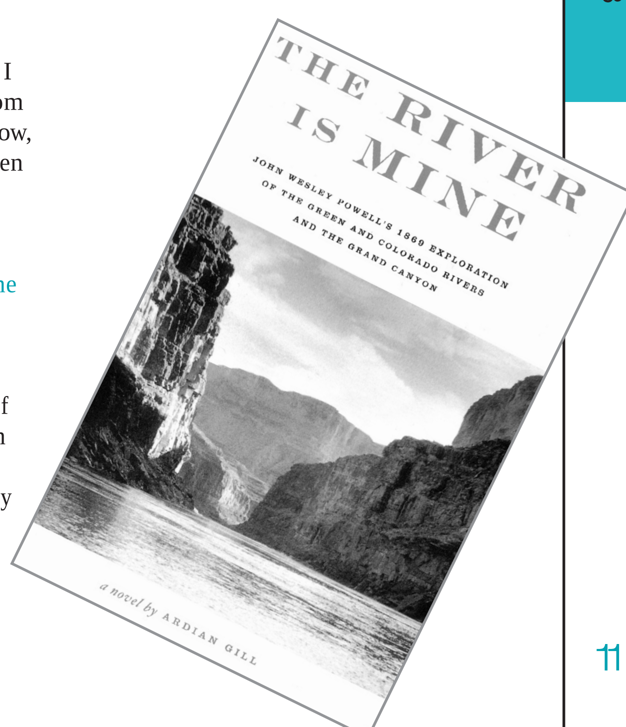
What would you suggest to our readers with similar ambitions?

Gill: I recommend the hybrid between fiction and history. Stories are about character, and having a real story to guide you makes it possible to focus on the characters and their development. In my case, I used several real people as models (which is where the novel form is convenient); one particular roguish uncle was especially helpful.

It sounds like a tremendous effort. Are you glad you did it?

Gill: It was fun, so much so that I'm at work on my next novel!

Peter Hutchings, New York, retired CFO of The Guardian, can be reached at mdwplh@aol.com. Ardian Gill, president of Gill and Roeser Life Intermediaries Inc., can be reached at AGillR@aol.com.



boardbulletins

Flexibility in course selection for ASA approved by Board

During its Jan. 6-7, 2003, meeting, the SOA Board of Governors approved allowing some substitution of specified courses to satisfy the educational requirements of the ASA.

Specifically, the requirements are changed from Courses 1-6 to completion of Courses 1-4 and the Associates Professionalism Course plus two additional "courses" from Courses 5-8 and Professional Development (PD), with certain restrictions. Candidates will continue to complete the professionalism course to attain the ASA.

Restrictions on course substitution include a prohibition on using the specific combination of Course 7 and PD toward the ASA requirements, and that the PD component, if used toward the ASA, must include a significant (15-25 units of the 50 required) formally tested/evaluated element (e.g., CFA exams, EA exams).

The Education and Examination (E&E) Committee is charged with developing the implementation details and planning and instituting this change as soon as possible.

The action was taken in recognition of Board and employer/practitioner concerns that the ASA requirements since 1995 and 2000 have had the undesirable effect of postponing the candidate's effective grounding in practical and practice-specific competencies, and that the landmark of achievement represented by the ASA should come earlier in the education and qualification process.

The redesign currently under way will peg the ASA at approximately halfway to an FSA. Rather than force some temporary realignment of ASA requirements in the current system, providing some flexibility in the courses required for ASA allows candidates and their employers to incorporate more specialized and practical requirements into their path to the ASA. For example, retirement benefits candidates in the United States might select a path to ASA that would include Course 8 and the PD component (which encompasses the EA examinations).

The change represents a fundamental change in the ASA qualification, from a broad practical foundation including some concentration on assets and investment, to a more tailored program emphasizing some practice-specific or other traditionally Fellowship-level competencies on a solid base of mathematical concepts and applications of actuarial practice.

The FSA is unchanged. Candidates will need to complete any remaining components of the current system to obtain the FSA designation.

We hope this change enables the ASA to be recognized as more useful and relevant in the marketplace, and that it encourages candidates who might otherwise abandon the pursuit of the designation to complete the ASA.

The general officers of E&E discussed the implementation of the change when it met on Jan. 25, and announcement of implementation plans and details/restrictions will be made to the SOA membership and potentially affected candidates as soon as possible after being finalized.

Notice: Voting begins in March

Voting for the candidates on the first ballot for the 2003 Society of Actuaries election of officers and board members will be held electronically for all Fellows who have e-mail addresses on the SOA database.

To make certain the SOA has your updated e-mail address, please check your information on the online directory at www.soa.org. Voters will be able to download and print the biographical materials and a sample ballot. First ballot voting will begin in March.

Fellows who do not have an e-mail address on the SOA database will receive paper election materials in the mail. Voters will have 30 days to cast their ballots.

For technical questions related to electronic voting, please e-mail Margaret Ann Jordan at elections@soa.org.

For general questions about the first ballot election, please contact Lois Chinnock at the SOA office (847.706.3524; e-mail: lchinnock@soa.org).

SOA adds five new monographs to its online publications library

Five new monographs have been added to the Society of Actuaries' online library at www.soa.org. The new releases, which encompass the areas of finance, retirement and life, are: Asset-Liability Integration by Krzysztof M. Ostaszewski; Why Men Die Younger: Causes of Mortality Differences by Sex, by Barbara Blatt Kalben; Retrospective and Prospective Analysis of the Privatized Mandatory Pension Systems in Mexico, by Tapen Sinha; Retirement Planning Software, published by LIMRA International, the Society of Actuaries and the International Foundation for Retirement Education; and Actuarial Considerations in Insurance Mergers and Acquisitions: An International Perspective, by Jim Toole.

- Asset-Liability Integration analyzes the asset-liability management process in the financial intermedia tion industry. In it, the author strives to define a mission for the modern insurance industry, its place in the financial intermediation network, and the role of asset-liability management in that mission.

- Why Men Die Younger: Causes of Mortality Differences by Sex discusses the phenomenon of why females live longer than males. The author's research documents an underlying consistent pattern of factors contributing to the mortality differential between males and females. The paper attempts to synthesize the evidence supporting and refuting the hypothesis for the sex mortality differential.

- Retrospective and Prospective Analysis of the Privatized Mandatory Pension Systems in Mexico explores different aspects of social security and pensions in Mexico. The author provides in-depth details of Mexico's old and new systems and discusses why private management of pension is unlike privatization of other spheres of activities.

- Retirement Planning Software reviews retirement planning software programs currently available to individuals and their professional advisers. The authors developed six case studies to test 19 programs and their capabilities. The goal of the research was to determine how prevailing programs treat the retirement phase and, more specifically, how they treat retirement risks.

- Actuarial Considerations in Insurance Mergers and Acquisitions: An International Perspective is aimed at an international audience and presents an overview of the process unique to insurance mergers and acquisitions, and to the actuaries involved in them. The author addresses the key elements of actuarial appraisal models and then looks at the various considerations of the sale process from both the buyer's and the seller's perspective. The developments of economic and actuarial assumptions, as well as the three traditional elements of appraisal value, also are examined.

The SOA recently began publishing monographs exclusively on its Web site in order to make important research readily available to a broad audience. The monograph series includes topics ranging from actuarial perspectives on the implications of a rapidly aging population to a study of public financial guarantee programs to an analysis of methods of health risk assessment.

WWW

Asset-Liability Integration

Why Men Die Younger: Causes of Mortality Differences by Sex

SOA

Retrospective and Prospective Analysis of the Privatized Mandatory Pension Systems in Mexico

Retirement Planning Software

ORG

Actuarial Considerations in Insurance Mergers and Acquisitions: an International Perspective.

ce corner

SOA, LOMA and LIMRA team up to offer pension and annuity conferences

Plan now to attend the 2003 Pension Conference and the 2003 Annuity Conference to be held April 6-8, 2003, at the Marriott Baltimore Waterfront in Baltimore, Md.

The SOA has joined forces with the LOMA and the Life Insurance Marketing and Research Association (LIMRA) to bring you a comprehensive Pension Conference dealing the marketing, sales, operations and development of pension plans.

Attendees of the Pension Conference will learn the latest in DB and DC pensions and network with more than 500 pension and annuity professionals. Sample session topics include:

- Conservation in a volatile market.
- Variable and fixed annuity product development.
- Distribution trends.
- Income products.
- Wholesaling strategies.

For more information about this program, visit http://www.loma.org/pension.htm, e-mail John Riley at jriley@soa.org or call 847.706.3543.

The Annuity Conference, to be held at the same time and place, offers session topics such as:

- Market timing.
- Choosing and forming alliance partners.
- Group annuity contracts.
- 412(i) plans.
- Marketing savvy in a crowded marketplace.

For more information about this program, visit http://www.loma.org/annuity.htm, e-mail John Riley at jriley@soa.org or call 847.706.3543.

As a bonus, registered attendees of either conference can also attend sessions at the other (held concurrently) for no additional charge. That means you can choose from more than 30 concurrent sessions and learn the latest developments in the pension and annuity industries.

Early registration is now available for both conferences. Just visit the Web sites above to sign up before March 7, 2003, and you'll save $75. The early registration fee is $725 for LOMA, LIMRA and SOA members and $995 for nonmembers.

Retirement research grant program includes actuarial science

The Center for Retirement Research at Boston College is soliciting proposals for the Steven H. Sandell Grant Program for Junior Scholars in Retirement Research.

The program promotes research on retirement issues by junior scholars in a wide variety of disciplines, including actuarial science, demography, economics, finance, gerontology, political science, public administration, public policy, sociology, social work and statistics. Grants of up to $25,000 will be awarded for each successful applicant.

The program is funded through a grant from the Social Security Administration (SSA). Successful applicants will be eligible to apply for access to restricted data sets and will present their results to SSA.The deadline for proposals is March 14, 2003. Awards will be made in May 2003 and final projects will be due within a year of the award. Information is available on the Web at www.bc.edu/crr and from Kevin Cahill, the Center's Associate Director for Research at 617.552.1459.

Actuarial Research Exchange launched

The Actuarial Research Exchange, an online service designed to link academic researchers and practicing actuaries for collaborative work on practical business problems, was launched in January 2003. This service, established by the Committee on Academic Relations, is a joint committee of the Casualty Actuarial Society (CAS), the Canadian Institute of Actuaries (CIA) and the SOA.

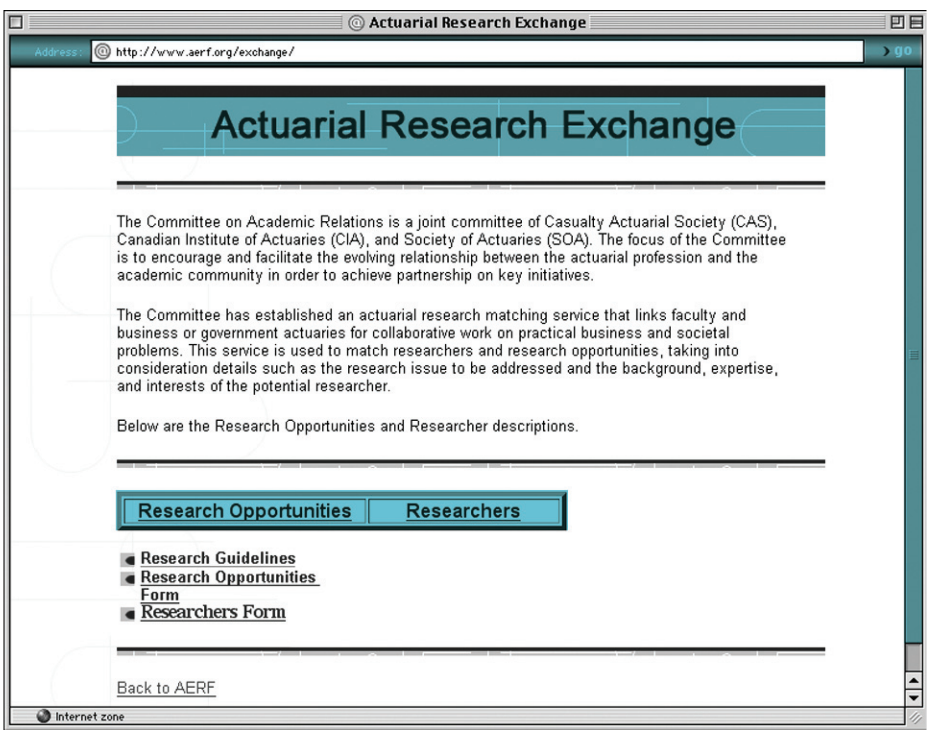
Essentially a matching service, the Actuarial Research Exchange links faculty researchers with research opportunities, taking into consideration the research issue to be addressed and the background, expertise and interests of the potential researcher. The service is hosted online through the Actuarial Education and Research Fund (AERF) Web site at www.aerf.org. It represents more than a year's work on the part of the Committee and the cooperative effort of AERF and the three sponsoring actuarial organizations.

The chairperson of the Committee on Academic Relations, Dale Porfilio, was ebullient when asked to describe the inspiration behind the new service.

Organizations are encouraged to post their research needs on the site, where faculty researchers can review the opportunities and respond to those that match their research interests.

"The existing research programs of each actuarial society already produce high-quality research," he said. "However, this research is usually performed independently by practicing actuaries or academics."

"At the same time," said Porfilio, "some research ideas sit in the minds of practicing actuaries but do not get done due to lack of resources. The Committee on Academic Relations is creating the research exchange to more fully apply the excellent research abilities of academics to the research needs of the actuarial profession in a cooperative, interactive format."



Actuarial Research Exchange Web page—*www.aerf.org/exchange.*

The goal of the Committee on Academic Relations for the Actuarial Research Exchange is to increase the number of collaborative projects between practitioners and the academic community. In time, joint faculty and business research projects will be more common, such as having a faculty member spend a summer or sabbatical leave at a business working with the organization's actuaries on practical actuarial problems.

The Actuarial Research Exchange consists of two main components: One section lists the research opportunities posted by organizations and the other lists the faculty members interested in conducting research, including specific areas of interest (see the screen shot of the Actuarial Research Exchange Web site).

Organizations are encouraged to post their research needs on the site, where faculty researchers can review the opportunities and respond to those that match their research interests. There is no cost to the organization to post a research opportunity which can be submitted through the Web site by completing an online form.

An additional benefit to organizations is provided through the list of faculty members who are interested in conducting research. The listing allows companies to contact faculty members directly about research projects. Faculty

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Enterprise risk management—a new horizon for the actuaries

How will the profession respond?

by Meredith Lego, SOA marketing manager

Financial markets are fluctuating. Consumer investing behavior patterns are shifting as the population ages. Regulators are enforcing stricter laws resulting from recent financial scandals. Threats of war and terrorism are in the news daily. Clearly, the role of forecasting and managing risk has become an increasingly important function within the enterprise. But are actuaries well positioned to be the lead advisers and experts in managing risk?

Enterprise risk management—the growing demand

Although the actuarial profession has practiced the art of managing the financial implications of risk within the insurance industry for nearly a century, "enterprise risk management" (ERM) has jumped on the radar screen as a new area of focus for many organizations over the last decade. ERM is the way institutions are moving to control the inter-relationships between risks across the entire enterprise, and addresses such risks as strategic, financial, investment, operational and hazard.

The increasing importance placed on ERM has occurred as businesses realize it is a good business practice that provides a conceptual framework to coordinate risk management activities. Simultaneously, many view it as a competitive advantage.

During this period, many education and research organizations, including universities and professional associations, have recognized this trend and developed programs to educate and certify professionals in skills required to manage enterprise risk. Moreover, demand for these skills, both by employers and by professionals wishing to acquire recognized credentials, has increased at dramatic rates.

The Global Association of Risk Professionals (GARP), founded in 1997, has developed the Financial Risk Manager (FRM) credential, which encompasses quantitative and fixed income analysis; market risk management and capital markets; credit risk management; operational and integrated risk management; legal, accounting and tax risk management; and regulation, compliance and ethics. Amazingly, there are nearly 2,000 FRMs after five years, and that number could grow by as much as 1,500 with the 2002 exam sitting.

The Professional Risk Managers International Association (PRMIA), founded in 2002, is focused on leading the risk management industry by driving the integration of risk management practice and theory. It too has a certification program, the Certified Risk Manager, with its first qualifying exam in 2002. Similarly, the Institute of Risk Management in the United Kingdom has the

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Actuarial Research Exchange launched

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members who want to take advantage of this complimentary service can post their contact information, research interest and brief vita.

Completed research projects that are not proprietary also will be published on the site to serve as a showcase for joint projects between academic researchers and practicing actuaries.

The Actuarial Research Exchange is the latest project of the two-year old Committee on Academic Relations. The focus of the Committee is to encourage and facilitate the evolving relationship between the actuarial profession and the academic community in order to achieve partnership on key initiatives. The Committee's responsibilities include maintaining the Academic Relations e-mail discussion list and the Actuarial College Listing.

In addition to Chairperson Porfilio (CAS), committee members include Grover Edie (CAS), Nasser Hadidi (CAS), Bryan Hearsey (SOA), Michel Jacques (CIA), Steve Kopp (CIA), Arnold Shapiro (SOA), Alice Underwood (CAS) and Catherine Wallach (SOA).

Fellow and Associate designations in risk management.

Finally, university programs, led by Georgia State and the University of Pennsylvania, have combined their actuarial science programs into their risk management programs. Moreover, they have integrated actuarial science with their business school programs in an effort to link the quantitative and risk management skills with general business skills.

Actuaries practicing ERM

Certainly, other professionals are positioned to assume responsibilities and leadership within the risk management function—even within the insurance industry. Tillinghast-Towers Perrin conducted a benchmark survey in September 2002 on the topic of Enterprise Risk Management (ERM) in the Insurance Industry. Sixty-eight percent of the survey respondents have a significant presence in the life/health insurance business and 42 percent in the property/casualty insurance business.

Chief actuaries were responsible for ERM activities at 16 percent of the companies surveyed. However, chief financial officers (CFOs) and chief risk officers (CRO) were responsible for ERM at 33 percent and 19 percent, respectively, at other companies. The remaining 32 percent utilized the CEO, a risk management committee, an asset/liability management committee, the chief audit officer, or "other" positions to manage ERM activities.

On the positive side, most CROs came from actuarial departments. Companies surveyed reported that 56 percent of CROs came from internal positions and 44 percent from external positions. As shown in Exhibit 1, 47 percent coming from internal positions were from the actuarial department, with 16 percent coming from finance and 37 percent from "other."

From external positions (Exhibit 2), 33 percent came from an actuarial department, 27 percent from banking, 13 percent from risk management and 27 percent from "other." Clearly, the actuarial profession is in a stronger position to take leadership roles in ERM within the insurance industry—right now. However, will these companies continue to look to the actuarial department for ERM skills into the future?

Many within the SOA have recognized this growing opportunity in the insurance industry. Earlier last year, the new Task Force on Risk Management was formed with the specific goal of advising the Committee on Finance Practice Advancement about risk management and making risk management a regular part of actuarial practice through education and recognition.

Chaired by David Ingram, an FSA with Milliman USA, this task force has rapidly gained momentum, growing to a size of nearly 250 members geared toward furthering actuarial thinking and involvement in ERM. The task force is focusing on multiple issues, ranging from covariance of risk factors to pricing. Strategic issues being examined include how to position actuaries as the CRO, not only within the insurance sector, but also within others business arenas as well.

Actuaries have been the risk managers for insurance companies for nearly 100 years. As such, their assessment of risk goes hand in hand with broader risk management strategies applicable to general financial service industries. Ingram shared examples of some risk management functions that traditionally have been performed by actuaries:

- Develop risk measurement and risk exposure reports.

continued on page 18

Exhibit 1

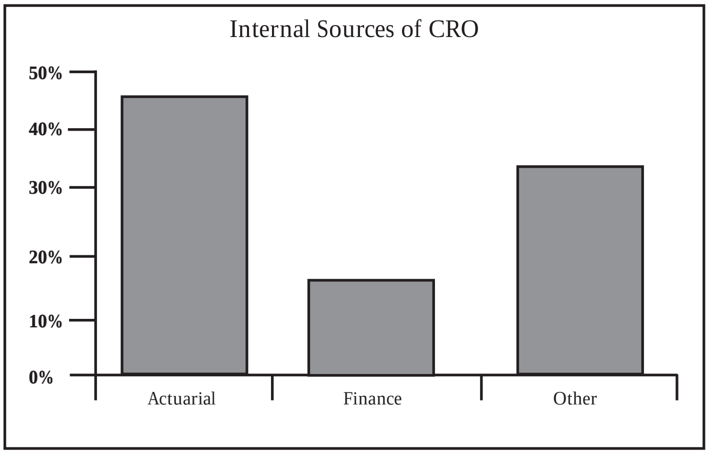
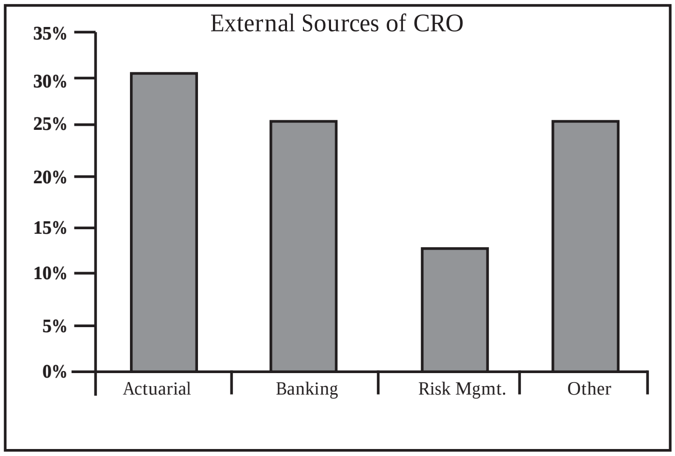


Exhibit 2



Source: Enterprise Risk Management in the Insurance Industry—2002 Benchmarking Study, Tillinghast-Towers Perrin.

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- Develop risk limits.
- Develop risk control processes.
- Perform risk analysis of new products and investment opportunities.
- Analyze earnings volatility and reaction.
- Perform RAROC & risk adjusted financial reporting.
- Perform risk-adjusted pricing.
- Perform merger due-diligence risk analysis.
- Develop economic capital calculations.

And, of course, there are numerous examples of actuaries analyzing, managing and measuring risk in the insurance sector. The Risk Management Task Force, while focused on a number of topics, has a subgroup that is specifically focused on ERM by working toward the development of a comprehensive framework on identifying, measuring, monitoring and managing uncertainty within the ERM framework. You can read more about their efforts in this month's issue of Risk and Rewards, available online at www.soa.org/library/sectionnews/investment.

Can the profession lead the ERM wave outside of insurance?

What about other industries that require risk management? Would actuaries be the first-choice provider of ERM expertise? Can actuaries transfer their skills to other industries? Do actuaries see themselves as filling a role in the ERM function outside the insurance industry?

These are the chief questions being explored by both the Risk Management Task Force and the Strategic Planning Committee, which reports to the Board. But can the actuarial profession act fast enough before others fill the marketplace need? Do the various actuarial organizations wish to act? What are the ramifications if no action occurs? Let's look at one case example.

In the 1980s and 1990s, a new buzzword grew with increasing popularity: "financial engineering." Many within the SOA recognized this growing profession as a logical expansion opportunity for the actuarial profession. University systems recognized the need as well and refined master's programs specifically designed in quantitatively oriented financial analysis. What exactly is financial engineering? Frederick Novomestly, academic director of the Financial Engineering Program at Polytechnic University, gave a presentation at the 1998 International Association of Financial Engineers Conference and listed one perspective of what financial engineers do:

1. Develop, price, trade, evaluate and apply new financial products.
2. Assess/manage risk and implement sophisticated investment and risk management strategies.

Clearly, the demand for professionals with skills to analyze, manage and measure risk are abundant in mulitiple industries. Actuaries have the opportunity to fill that need.

In many respects, these are the basic roles filled by actuaries in the insurance sector. Yet, if the marketplace were aware of actuaries, would financial engineering programs in universities today be filling some of the need for quantitative financial skills?

Moreover, how can the profession ensure that individuals practicing these skills are recognized as "actuaries"?

Going forward

The actuarial profession is facing multiple challenges that can also be viewed as opportunities. Clearly, the demand for professionals with skills to analyze, manage and measure risk are abundant in multiple industries. Actuaries have the opportunity to fill the need. The question remains: Does the profession wish to act? Given the challenge, the call to action must be addressed sooner rather than later. In the business world, windows of opportunity open and close with dizzying speed.

Various committees (including the Strategic Planning Committee chaired by Norm Crowder) at the SOA are thinking about this issue and encourage your feedback. Please send any comments to strategicplan@soa.org.

presidentialmusings

Image is everything

by Harry Panjer

They say perception is reality, so image is everything. The recently released Hollywood film About Schmidt has Jack Nicholson portraying an actuary. I heard that a well-known Omaha actuary was followed around for a day to find out what excites actuaries (besides things appropriately labeled XXX coming from Washington), how actuaries dress (you decide!), etc. etc. Given Nicholson's character in the film, you might wonder who that actuary is. I won't give it away. See the movie and try to figure it out for yourself.

The rumor that this film was in production has been circulating among actuaries for some time. We all wondered how actuaries might be portrayed. We're not alone in worrying about our image in films. Recently, Australian Accountant claims that the movie industry gives accountants a bad name by portraying them as boring. Yes, boring!! Imagine that.

Julie Kerr, director of CPA Australia has been quoted in the press as saying, "This stereotype would be funny if it wasn't potentially harmful. In the past five years in Australia, the number of accounting graduates has fallen by 9.8%… . Research by various accounting bodies around the world shows that this entrenched image runs counter to reality. Images in the media are really important. …What we need is an accountant version of Ally McBeal."

My first reaction to reading this was that accountants in Australia need a serious lesson in causality and spurious correlation. After all, both the annual level of rainfall and stock market in Australia are likely to be down over the same period. Why not blame them? My next reaction was: "Really?" We've got Jack (or at least his character in the movie). They want Ally. Which image do you prefer?

What do the people who matter think of actuaries and how do we think of ourselves? The SOA recently completed two formal studies, one using a long series of employers, the second using a lengthy survey of actuaries and actuarial students. Meredith Lego, marketing manager of the SOA, has already written about these studies in The Actuary (see October and November issues, 2002). It's interesting to see that there are differences between our self-perception and those of the people who hire us.

We seem to be very high on the value of our rigorous qualification process, our breadth of knowledge and our strong sense of ethics and code of conduct. Employers seem to value skill sets and the ability to add value to an enterprise. However, they also believe that our depth of knowledge is lacking in newly emerging areas, even within our own traditional areas of practice. In addition, they also believe—based on their own experience—that actuaries are not as adept in communicating their analysis or recommendations to others in a way that is easily understood and can be acted on.

I might mention financial and enterprise risk management. The term "actuary" doesn't spring to a CEO's mind automatically when these are mentioned. However, it should.

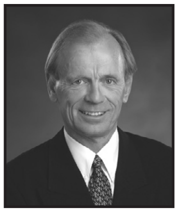
Fortunately, there is now a strong movement within the SOA led by Dave Ingram, FSA, to get the profession up to speed quickly. To learn more about the threats and opportunities we face as a profession in financial and enterprise risk management, read the article written by Lego in this issue entitled, "Enterprise risk management—a new horizon for the actuary. How will the profession respond?" In addition, you can learn more about the work Dave and others are doing in the next issue of Risk and Rewards, published this month.

In the world of marketing, a brand is a promise and, if you don't deliver on the promise, you'll be replaced. Although we don't explicitly have a "brand" other than the FSA or ASA, the studies tell us that our image in the insurance industry marketplace is that of a very skilled "insurance industry" quantitative technical expert. The same is true in the pensions field. If we aspire to be more than this, we all need to think about what we want our future to be and embrace it by delivering on the promise.

If we follow the SOA vision for actuaries to be the "leaders in the modeling and management of financial risk and contingent events," we must think about our identity and role as advisers and leaders in much broader risk management, including the traditional areas. Then we must ensure we can practice the skills valued and demanded in this arena—including the business and communications skills.

But we've got to do more. The SOA Strategic Planning Committee is working hard to set the agenda for the profession based, in part, on two important studies. I encourage all actuaries to have a look at them. They are on the SOA Web site at www.soa.org under the heading "SOA 2002 Member/Candidate and Market Opportunity Research."

As a solution, Ally McBeal just doesn't cut it for me.



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