SOCIETY OF ACTUARIES

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China, albeit not immune. But that feeling is not a very satisfying one because such insulation will not always be available if financial reform is to proceed on schedule. So it is with the life insurance industry. While the impact of foreign insurance companies is minute at this time, the risk that comes inevitably with a fast-growing industry will be considerable.

Because of China's short insurance history, no one in China has a comprehensive understanding of the risks that an insurance company faces or the risks to the economy and the society if one fails. This is an uncomfortable feeling. Without the comfort of knowing the nature and possible sources of future problems, one could hardly be sure that these problems can be brought under control when they are known. In general, well-managed institutions in a healthy external environment present very little concern. The fear, however, is that neither is assured. Indeed indications are to the contrary.

In a developing economy where well-balanced regulations are wanting, the situation is difficult for even domestic companies. China's current insurance law is at best formative. Its existing framework is fragmentary and prohibition-oriented rather than integrative and promotive to a healthy industry. Problem prevention can never be too extensive. What if some major problems are not preventable in the current laws? What if some problems are simply left out? What about the problems we cannot foresee? What if … Should one be worried? Decidedly so. Obviously much needs to be done and much can be done.

In such an environment, why are such worries directed at foreign institutions only? Wouldn't domestic companies, possibly even less well-managed, be as much a menace to financial tranquility as the foreign companies? To foreigners, the answer is probably yes but among Chinese officials, the answer is *no*!

Right or wrong, there is still a strong feeling among Chinese officials that if a problem is anticipated, the government can always mandate cooperation from even privately owned Chinese enterprises to prevent the problem. Right or wrong, there is also the belief that such mandated cooperation will be hard to come by from foreign enterprises without pre-existing laws that support such mandate. Right or wrong, until the leadership believes that the regulatory facilities are fully equipped, it is best to "probe the next rock to cross the river." Probing the next rock does not translate to a full run.

Lest I am taken to exaggeration, visualize an American insurance company being told to sell the high-end apartments in their approved portfolio because the government thinks that the real estate bubble is about to burst. Its first reaction, if not its first response, would probably be, "You have no basis to do that. Where is the law?" Right or wrong, right now there is no law. Right or wrong, the Chinese leadership does not want to deal with it.

Right or wrong?

Yuan Chang, FSA, is Chairman and CEO of MetLife, Greater China Operations in Hong Kong.

Highlights of the 1997 International Underwriting Congress

by Chris Cook and Vera Dolan

The first International Underwriting Congress (IUC) took place February 23–26, 1997 in Mexico City. More than 670 registrants representing 237 companies from 40 countries attended. The conference organizer, the Vermont Insurance Institute, was encouraged by the IUC's success to begin planning for the next IUC to be held in June 1999 near London. The following are summaries of presentations made at the first IUC.

Critical Illness Products

A summary of critical illness/dread disease products sold in the U.K. was presented by Jerry Brown, chief life and disability underwriter at Mercantile & General Re in London. A review of the experience with these products in Australia, New Zealand, and Asia was presented by Michael Molesworth, assistant general manager at Cologne Life Re, Australia.

"Critical illness insurance in its modern form was developed in South Africa in the early 1980s. It is a health insurance that seeks to protect consumers against the financial consequences of potentially catastrophic illness and injury by paying a lump sum on the occurrence of specified events such as the diagnosis of invasive cancers or myocardial infarction. The product has been successfully transported to many other developed insurance markets," Mr. Brown said.

"The payment of a critical-illness claim is a survival, living benefit. It is payable to the insured, not the insured's dependents. It is based on the diagnosis of specified diseases, not necessarily on their severity. Payment is made even if there has been a full recovery, and it is not based on the inability to work. The typical U.K. critical-illness product consists of six "core" diseases and 10 to 12 "additional" events. The six core diseases include: myocardial infarction, coronary artery bypass surgery, stroke, cancer, major organ transplantation, and kidney failure," Mr. Brown explained.

Mr. Brown described that as the number of critical illness sales have greatly increased in the U.K. over the past five years, the number of new endowment sales has decreased to a

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similar extent, indicating the success of critical illness as a new insurance product during a difficult recessionary period for the U.K. life and health insurance market. The average face amount of insurance purchased has stayed at about $70,000 (U.S.). To date, the market penetration for these products has been 1.5% within the total U.K. population, but 3.5% within the working population. "The average age of the typical purchaser is 34 and he or she tends to be in the higher socioeconomic classes. The average income is £16,300, and 68% of the buyers are male. About 57% of the buyers are married, and about 20% are self-employed," revealed Mr. Brown.

In looking at U.K. market's critical-illness claims experience, out of more than 4,000 claims, 55% were from cancer, 24% from heart attack, 8% from stroke, and 4% from coronary bypass. "The lessons learned from claims for underwriting include the high potential for nondisclosure of pertinent medical history. It is difficult to pursue nondisclosure concerns for apparently trivial complaints, and very difficult to forecast cancer claims. Family history is very important in determining the likelihood of a dread disease," Mr. Brown observed.

"You need to thoroughly understand all the demographic, social, economic, political, and cultural aspects of both the general population and your desired target market."

Mr. Molesworth explained that "dread disease insurance products were first introduced to our region in Singapore in 1985, in Australia in 1987, and are now in most local markets. Their penetration into the various markets has been variable, but generally it could be described as very successful with new business growth between 25% and 40%." They are typically an add-on feature to a life product that accelerates the payment of a death benefit if certain core events occur.

"The history of the products developed in each market is similar, but variances due to the underlying differences in the markets do exist. The two main areas of difference are the basic type of death covered and the actual 'additional' events covered. The Asian market generally writes dread disease business as a benefit added on to traditional types of coverage, such as whole life, endowment, and level-term policies. The Australian life-risk market is almost totally an annual renewable term market," Mr. Molesworth said.

"The claims experience from all the markets shows that the basic four or five core events make up the majority of claims. Cancer is the most common event in most markets, with 78% in Asia, 57% in Australia, but only 39% in South Africa. An analysis of Cologne's actual versus expected claims in Australia indicates that cancer claims (150% by number, 200% by amount), heart attack claims (just under 200% by number and amount), and coronary artery bypass surgery (over 300% by number and amount) show a worrying early trend. These concerns are accentuated by an analysis of claims by duration that does occur, particularly in cancer claims. The antiselection relating to female cancers is the worst, and this seems associated solely with breast cancer," Mr. Molesworth stated.

"Consumer groups in most markets are showing an increased interest in the insurance industry, the conditions and limitations of the coverages offered, sales and marketing practices, and, of course, underwriting and claims assessments. The dread disease products have a very high claim denial rate (between 20% and 30% in most markets) in comparison to the usual life insurance products. These denials arise mainly from nondisclosure associated with the original application, and failure of the insured's medical condition to satisfy the policy event definitions. There is a need for the industry to address these claims denials at the earliest opportunity to avoid incurring the wrath of the consumer advocates," Mr. Molesworth pointed out.

"The modern advances in diagnostic medicine and the effectiveness of treatments and vaccines over the past decades have been remarkable. The future will bring even more rapid developments in these areas. The dread disease product, the events covered, and their definitions need to be considered in terms of their appropriateness in the future. The individual policies written today may be in force for 30 or 40 years. Are we prepared for the advances in medical science in relation to dread disease benefit design? Is the right to amend policy conditions and events necessary in today's products?" asked Mr. Molesworth.

Using General Population Data

A framework for helping develop new underwriting guidelines and mortality assumptions for markets where there has been little or no insurance experience was presented by Rick Bergstrom, a consulting actuary with Milliman & Robertson in Seattle, Washington, and Vera Dolan, president of VFD Consulting.

"The methodology for converting general population and clinical study data into life tables has been long available, based on work done by Dr. Richard Singer and the late Edward Lew. Instructions in these methods can be obtained through the American Academy of Insurance Medicine. However, many people who discuss these methods customarily invoke the phrase 'apply the results carefully to risk selection,' and typically go no further. I have never liked this phrase, for it is vague and not very helpful," Mrs. Dolan said.

"Rick and I propose that insurers take advantage of the opportunities presented by new markets, better technology, and better population and clinical data to construct mortality assumptions that explicitly recognize all those factors that contribute to the difference in mortality due to the selection effect. Before going into any new country, insurers need to gather and assimilate the available general population information to establish their product design, pricing, and marketing plans. They need to establish an initial knowledge base that will be consistently and dynamically updated and evaluated as in-country experience is gained," suggested Ms. Dolan.

"Until you have more information, do the best with what you have. You

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need to thoroughly understand all the demographic, social, economic, political, and cultural aspects of both the general population and your desired target market. The factors that you determine are important to the local population should be assigned quantitative estimates that must be consistently monitored and updated as time goes on. Since you will not have fully trained people who already understand these things implicitly, explicit consideration will help you deal with the differences and potential problems in a shorter amount of time than would have been possible if you simply started selling and then checked on the results several years later," Ms. Dolan stated.

"Start with local or regional population life tables by age and sex and deconstruct these according to the causes of death and associated factors that affect your target market. Assign adjustment estimates that you believe to most closely reflect locally significant aspects which have an impact on selection. You will end up with a three- dimensional life table for each sex with the customary axis of age by policy duration, and another axis that itemizes each cause of death and each adjustment factor you applied. You can start with simple spreadsheets or a database, and expand your system from there. This is the basis of your product assumptions, and a change in these tables should then flow directly to underwriting, marketing, and your education efforts as you bring new ideas to the population you are serving," Ms. Dolan said.

Mr. Bergstrom described the relationship between general population life tables and insured mortality. "Overall, the mortality curves for insureds are not only reduced from the general population, but the slopes of the curves are different because the selection effect increases with age. The relative causes of death are different at different ages. For example, in the U.S. at age 20, the top causes of death are accidents, suicides, and homicides, which are hard to predict or underwrite. At age 60, the top causes of death are cancer, heart disease, and chronic obstructive pulmonary disease, which are far easier to underwrite and select."

"In mature insurance markets, we have access to a whole array of reporting and testing tools, each of which reveals information on particular causes of death. Given that we can then minimize the risk of early death for selected causes of death, at each age we can eliminate or reduce the contribution of one or more causes of death to the overall population mortality rate. This reduced rate reflects the effect of selection, yielding an estimate of expected insured mortality," Mr. Bergstrom pointed out.

"In developing markets, we will need to bring in the right underwriting tools and tests appropriate to the causes of death seen in each country. We can estimate their resulting effect on the general population mortality by applying the tool's or test's predictive value to what we already know about the general population matrix of causes of death. The result will be our working definition of the insured mortality. If no local population data are available, use data from a country that is similar, and replace that information with local information as it becomes known. I advise that you be conservative in establishing your assumptions, but not overly so," Mr. Bergstrom recommended.

Chris Cook is Regional Director of Unterwriting at Aetna in Hartford, Connecticut. Vera Dolan is President of VFD Consulting in Ukiah, California.

Hong Kong Seminar

Seminar attendees are spellbound at the Asia Seminar in November.

The Asia Seminar in Progress! (Left to right) An unidentified local actuary, Shirley Shao, Bruce Moore, Mo Chambers, and Bill Bugg.