



SOCIETY OF ACTUARIES

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Columbia Ambassador's Report

by Luis Gabriel Caro

In Colombia there are currently two actuarial organizations: Asociación Colombiana de Actuarios and Asociación Nacional de Actuarios. Each association has approximately 60 members. A member of the Asociación Colombiana de Actuarios is required to be an ASA or to hold a Master's degree from a foreign university in actuarial science. The requirements for membership in the Asociación Nacional de Actuarios are less restrictive; it is enough to hold an equivalent of a bachelor's degree in actuarial science from a local university.

The Asociación Colombiana de Actuarios, being an older association, has wider recognition among insurance and banking regulators and private industry. It has served as a permanent reviewer of

insurance regulation. As a matter of fact, it is almost a standard procedure that the drafts of new regulation are sent to the association for analysis and comments. Most of the members work for insurance companies or are private consultants. A few focus their activities in the banking sector, mainly with work related to market risks evaluation.

Several of the members of the association are taking exams of the Society of Actuaries. A few currently hold the ASA designation, but it is expected that within the next few years more members will complete the requirements.

Earlier this year we participated in the Congreso Panamericano de Actuarios in Buenos Aires, Argentina. Several

meetings took place regarding different issues related to the profession. Colombia was designated as the host country for the congress in 1999. We plan to have it in Cartagena, and given Colombia's accessible location for every part of the continent, we expect a large number of participants. In a later release we will provide more information related to this event.

For more information regarding our associations and our market, please contact me at: lgcfinac@impsat.net.co

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Observations on a Trip to China June 20 to July 5, 1997

by Harold G. Ingraham, Jr.

As part of a Society of Actuaries (SOA) delegation to China, I recently visited with various academics and representatives from the insurance and banking industries. The primary purposes of the trip were to attend and participate in actuarial student graduation ceremonies at Nankai University (Tianjin) and Renmin University (Beijing). Some members of the SOA delegation also participated in a seminar in Shanghai underwritten by Metropolitan Life Insurance Company (Met Life) and Fudan University, and also co-sponsored by Shanghai University of Finance and Economics (SUFEC), The People's Insurance (Life) Company of China, Ltd./Shanghai Branch (PICC), and American International Assurance Company, Ltd./Shanghai Branch (AIA). Other schools visited were Southwestern University (Chengdu) and Joatong University (Shanghai).

The graduation ceremonies at Nankai University also involved graduates of the school's Risk Management program. Most of these graduates had also success-

fully completed the Life Office Management Association (LOMA) exams.

This report sets forth my observations and other information gleaned from various meetings and discussions with (or writings from) individuals that took place during this trip.

Actuarial Exams in China

By now, it is widely known that the performance of Chinese actuarial candidates on the SOA's Course 100 Associateship exams has been phenomenal. Combined results for five exam centers administering exams since November 1992 show an 81% overall pass ratio on these exams—almost double the comparable pass ratio on such exams taken during this period by all other candidates in the rest of the world! Indeed, by mid-1995, 19 Chinese actuaries had become SOA ASAs based on the pre-July 1995 standard for becoming ASAs.

However, the post-July 1995 SOA requirement that the four Course 200 Series exams also be passed to obtain the ASA designation has proven very difficult for the Chinese actuarial candidates (with

one notable exception). Only a 24% overall pass ratio has been achieved on post-100 Series exams taken during the past year. The one notable exception is Wei Mong Bo, an actuary with AIA, who achieved his Associateship this past May by passing the required Course 200 Series exams.

Much of the difficulty in passing post-100 Series exams for the Chinese actuarial candidates is attributable to their lack of facility in English.

Also, however, Chinese actuaries have to be examined on North American-specific topics under the existing SOA exam structure. While some of the actuarial principles common to the profession are beneficial to their development as fully qualified actuaries, many North American-specific topics find little relevance in the day-to-day work of Chinese actuaries.

In the current redesign of the SOA Education and Examination system, U.S. and Canadian nation-specific topics are

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deferred to the Professional Development category. Consideration might be given to expanding the scope of nation-specific topics by enlisting the services of a given country's actuarial association to develop study materials and to grade the papers. In the case of China where there is no fully functioning actuarial organization currently in place, non-resident actuaries (such as those in Hong Kong and Taiwan) having close current working relationships could assist.

There are no Chinese actuarial exams currently developed to satisfy the requirements for accreditation of an Appointed Actuary by the Chinese government. Hence, the government will currently have to rely on designations of Fellowship in foreign actuarial bodies as accreditation for Appointed Actuary in a Chinese insurance company.

It has been rumored that the People's Bank of China (PBOC) may soon initiate the development of some nation-specific actuarial exams for Chinese actuaries. Such a project might include:

- A comparative study of corresponding exam systems in certain foreign countries (U.S., U.K., Japan, Taiwan, Australia).
- Establishment of the qualification requirements for actuaries practicing in China.
- Development of the structure of China's Actuarial Association and its constitution and by-laws.

No discussion of actuarial exams in China would be complete without addressing the issue of needed property/casualty study material. At the present time, the property/casualty sector accounts for about *two-thirds* of new insurance premiums in China. Particularly, as noted by Chris Daykin, then President of the (British) Institute of Actuaries in his January 1996 report on the then-current situation in China:

"One of the problems from the educational developments in China (other than at CIFAB) is that the links with the SOA have left general insurance largely uncovered, apart from some risk theory and loss distributions in the early parts of the SOA examinations. Some thought needs to be given to greater cooperation with the Casualty Actuarial Society (CAS) or the Institute of Actuarial/Faculty of Actuaries to fill this

gap, since a significant part of the future demand for actuaries in China could be in the general insurance (property/casualty field.)"

In August 1996, five professors from Hunan College of Finance and Economics (where there is an undergraduate actuarial program supported by Lincoln National) visited the CAS office. During their visit, they were informed about the committee structure and organization of the CAS, the education and examination process, and the membership management of the office. Other than that one contact, there has been no CAS involvement with the development of actuarial science in China.

SOA Asia Committee

The SOA has recently formed the Asia Committee of the SOA, to be based in Hong Kong. The Committee is open to all SOA members practicing or residing in Asia. The SOA's plan is to have this Committee place initial focus on actuarial development activities in China—later expanding its activities to other countries in Asia.

The Committee's mandates are:

- To represent the SOA in promoting actuarial education in Asia. With the growing demand for actuarial education, the availability of experienced educators and reference materials has become an imminent issue. The Asia Committee is planning a series of projects to address some of the issues, including a virtual tutorial center and SOA reference center.
- To provide services to SOA members in Asia in the development of actuarial education, research, and professional support. The establishment of the Asia Committee with a physical location in Hong Kong will provide a stronger SOA presence in this region and will provide easier access for members residing in this region.
- To build the image and awareness of the actuarial profession in Asia. Our profession is still not well understood by the nonactuarial community in this region. Managers and regulators may not be fully aware of the existence of our profession—and even if they are aware, they may not be cognizant of the full extent of the actuary's ability in their operations.

- To encourage the building of SOA reference centers in China.

Yuan Chang, a current SOA vice president, chairs the Asia Committee. In addition, Zhenghuai Li is serving as an advisor on Chinese actuarial matters. He is the deputy general manager of Tai Ping Life Insurance Company in Hong Kong and formerly headed the PICC's actuarial department.

In 1995, Yu Luo—then the SOA Ambassador in China and on the Nankai University faculty—attempted to organize a Chinese Actuarial Association (CAA) consisting of 19 ASAs who obtained their SOA Associateships at the pre-July 1995 level. While a few of the actuaries have circulated technical papers amongst their group, to the best of my knowledge they have never met.

Through Messrs. Chang and Li, the Asia Committee should attempt to make contact with and help coalesce this CAA. I hope that the CAA will be open to other Chinese actuaries and actuarial student with equivalent designations. The founding of the CAA will push Chinese actuarial research and normalization of the profession in China to a higher level. It will also serve to promote and enhance communications between Chinese actuaries and their international peers.

The Asia Committee can help the CAA develop Qualification Standards and a Code of Conduct. This Committee can also provide guidance for them in developing a concept of professionalism, a Discipline Process, and eventually Standards of Actuarial Practice.

Actuarial Activity in Shanghai

An actuarial training and exam center was established in Shanghai in September 1994 under the joint sponsorship of AIA and Fudan University. At this exam center, over 30 candidates have now achieved pre-July, 1995 SOA ASA exam status. And in the past two years, 22 former attendees of the AIA/Fudan actuarial training classes have been hired by various Chinese insurance and other financial institutions.

Shanghai has played a pioneering role in opening its insurance markets

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to foreign companies and also in the area of internationalization of the insurance industry. Intense competition among these Chinese capitalized and joint-ventured companies has accelerated the development of Shanghai's insurance markets. These developments have served to focus the Shanghai insurance industry on recognizing the importance of actuarial science.

The Shanghai-based actuarial profession has made special efforts to cultivate its own actuarial teaching staffs. At present, all actuarial teaching staffs for students at Shanghai University for Finance and Economics (SUFE), Fudan East China Normal and Tongji University are "home grown." One Fudan teacher, Associate Professor Zheng Yunyo passed ten ASA exams in one sitting. A second Fudan teacher, Associate Professor Yu Yuenian, passed 11 ASA exams in one sitting. Both of them have interned in Hong Kong.

The character of Shanghai actuarial education has been to utilize three separate approaches to develop a supply of actuaries:

- Full-time graduate and undergraduate programs
- AIA/Fudan actuarial training classes
- On-the-job training.

Recently, Fudan's mathematics department and AIA/Fudan center jointly held a meeting for "human resources exchange in applied mathematics." This meeting drew the attention of the Shanghai financial and insurance community. All major insurance companies and other financial institutions in Shanghai sent their representatives to participate in this meeting and expressed their wishes to hire actuarial students.

Some insurance companies in the Shanghai area are cooperating with Fudan and SUFE to offer training classes, to jointly sponsor research, and to publish some textbooks. AIA in particular has expended considerable efforts to promote actuarial education in China, through the establishment of the aforementioned AIA/Fudan actuarial training center. This center has produced a group of newly minted professionals who have achieved an 86% success rate on the SOA's 100 series exams. These actuaries are now working for various

financial and insurance institutions (or universities), mainly in the Shanghai area.

Also, MetLife has established an actuarial scholarship and teaching fellowship program at SUFE. And New York Life has been providing both scholarship and teaching assistance to Fudan.

A number of actuarial activities are currently taking place at SUFE. One current research project involves the application of nonlinear utility theory to premium rate making—a project sponsored by China's Social Security and Insurance Forum. Another involves placing SUFE's Actuarial Communications Newsletter on the Internet.

SUFE has organized an actuarial discussion group, consisting of two Ph.D. candidates, two post-docs and two associate professors. Their primary discussion topic in 1997 has been risk theory. SUFE also maintains a fairly extensive insurance and actuarial library that was established in 1995 under the joint sponsorship of John Hancock Mutual and the SOA. And SUFE is planning to host an "Actuarial Science Conference" this coming fall. All of the foregoing is to be coordinated through a new SUFE Research Center of Insurance and Actuarial Sciences.

Chinese Insurance Regulation/ the Need for Standards

China's new Insurance Law became effective on October 1, 1995. The law covers all commercial insurance activities within China. It stipulates that the financial supervision and regulation department of the People's Bank of China (PBOC) shall be responsible for the supervision of the insurance business and insurance companies.

To implement the new law, the PBOC issued two sets of regulations in 1996. Of particular interest is article 119, which states that:

"Insurance companies engaged in the life insurance business in china must appoint and employ a professional actuary certified by the financial supervision and control department and establish an actuarial reporting system."

Note that Article 119 does not define the term "professional actuary."

In a speech presented at the June 28, 1997 Chinese American Shanghai Insurance and Actuarial Seminar held at

Fudan, Nysco Shu (General Manager, AIA/Shanghai Branch) stated:

"Solvency concerns exist. To safeguard the long term interests of insureds and insure the financial safety of Chinese insurers, the actuarial division of an insurer should soundly price products and evaluate the company's financial condition. If a company takes no action on its existing problems, the actuarial division must report them to the associated department of the government.

The Chinese insurance industry must develop its own actuarial professionals and should establish its own standards of actuarial practice in conformity with world practice."

In September 1995 the first Appointed Actuary of AIA/Shanghai Branch was approved by the PBOC.

Problems Facing Actuaries in China

**From Yu Luo, ASA,
Former SOA Ambassador in China
Former Member of Nankai
University Faculty
Intern with Milliman & Robertson 1995-1996
Current student at University of
Wisconsin School of Business**

The complete acceptance of the actuarial profession in China will not be easy for two reasons:

- Many management people are not familiar with the importance of actuarial science. Moreover, those executives and managers who do appreciate the value of actuarial techniques have encountered difficulties in changing established methods and procedures.
- The Chinese actuaries have learned actuarial science academically and lack the knowledge, training, (and mentor!) To put it to much practical use. Until very recently, there were

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were few opportunities to gain actuarial experience in China.



From Chengfeng Shen, ASA Current Ambassador in China Currently Employed at Ping An Insurance Company Shenzhen

“Chinese actuaries” functions at the present time are largely limited to product design, pricing, and reserve calculations. And their techniques are often too simple.

Some of the reasons include the following:

- Life insurance in China is still in a relatively nascent state. Hence, it is premature to find applications of life actuarial science on a large scale.
- The life insurance industry in China is heavily influenced by the traditional Chinese economic system. The operations are yet to be commercialized, there is little competition, and entirely too much emphasis is being placed on expansion and too little on profitability.
- There is a lack of good, accurate historical data.
- Good judgment is a requisite of successful actuaries. However the training of enough qualified actuaries cannot happen overnight. For example, there are currently no consistent requirements on minimum reserves or loss ratios.



From Hongjian Bao, ASA Currently Actuary at China Pacific Life Insurance Company-Shanghai

The first generation of Chinese actuaries has to learn from books and publications and apply knowledge without the guidance of mentors.



From Yunyu Zheng, ASA Currently Deputy General Manager/Life Insurance Comprehensive Administration Department-China Pacific Life Insurance Company (CPIC) Shanghai

“Some of the problems facing actuaries at CPIC include the following:

- Insufficient management controls. Products are not yet under the head

office’s control. By year end 1996, CPIC had more than 100 types of products in use. Only about 10% of these were placed at the CPIC head office. CPIC doesn’t know the profitability of the products being developed without authorization in its branches. Some of them have the same names with different provisions; some of them have different names with the same provisions.

- Computer development is comparatively lagging behind.
- Insufficient actuarial staff. There is not enough time to do such things as profitability analysis by product, underwriting and marketing research, reinsurance studies, etc.
- Many life insurance clerks lack adequate knowledge of life insurance.



Some Final Thoughts

First, the growing contingent of ASAs and other trained actuaries in China currently has few role models for developing their actuarial careers. They also have grave doubts regarding the feasibility of attempting to achieve the FSA designation under the SOA’s current and proposed new exam system. For the SOA to maintain any degree of influence in China, it must at least hold out the promise that some official group will be working toward the development of some exams of local content (and in Chinese).

Second, the SOA’s new Asia Committee needs to activate a Chinese Actuarial Association at an early date. Contact should be initiated with sister bodies in the Far East and with the IFAA. It would be propitious if some sort of actuarial conference could be scheduled for Shanghai in 1998 or 1999, involving actuaries from various East Asian countries as well as China.

Third, there is a need for greater contact between local experts from the insurance industry and the Chinese actuarial students. More emphasis should be placed on expanding actuarial employment opportunities into certain non-traditional practice areas (investment, risk management in banking, asset liability management). In this regard, due partly to the statutory restrictions on the investment of insurance funds and partly due to China’s financial market still being rela-

tively under developed, there are currently few available investment channels. However, the number and degree of sophistication of investment vehicles should increase as China’s economy becomes more advanced.

Fourth, ongoing efforts should be made to change the prevailing image of actuaries in China as simply technical experts who calculate life insurance premiums. Here I am encouraged by what seems to be happening at Ping An Insurance Company in Shenzhen. Within the past two years, Ping’s actuaries have been able to apply some basic actuarial techniques to life insurance operations in areas such as contract analysis and financial management as well as in pricing. Their actuaries also are beginning to actively engage in communication and cooperation with international actuarial consulting firms, as well as peers from Hong Kong and Taiwan. Ping An has been selectively importing actuarial training and software, especially from Taiwan life insurance companies because of the close tie between the two cultures.

Also Ping An has started to send its actuaries overseas to keep up-to-date on the latest developments in the industry and in the actuarial profession.

It has now been almost ten years since the first time that I went to China to negotiate a Memorandum of Understanding with Nankai University, which served to initiate the very first actuarial program in China. At that time I recall that virtually no one that I encountered (whether academics, industry people, or government officials) had any concept of what the actuarial profession was about.

Now, ten years later, the actuarial profession in China has strongly taken root. While the profession there is certainly experiencing a variety of growing pains at the present time, I am extremely bullish about the ultimate strength and vibrancy of actuarial science in China in the 21st century. I predict that by the year 2010, Chinese actuaries will play a significant role in the IFAA and the world actuarial scene in general.

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