



SOCIETY OF ACTUARIES

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Chairperson's Corner

by Jim Toole

I thought I would escape this issue without having to write my way out of a corner (so to speak), but Randy threatened to fill the space by blowing up my picture a la Chairman Mao. He has a unique and persuasive way of filling out his newsletter (we haf vays of making you write!)

The International Section was started nine years ago by Bob Collette, Curtis Huntington, Kevin Law, Chip Moes, and Camilo Salazar, among others. The initial membership quickly superceded the minimum requirements and grew rapidly. The section survived a crisis in Mexico in 1994 and another in Asia in 1997, as well as membership rate increases along the way. Buoyed by the certain

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How We Helped Start the New Actuarial Profession in Kazakhstan in 2000

by Michael Sze

Background

Many countries in Eastern Europe and Central Asia are in the process of revitalizing their economy. An important step in the development of the free market economy is the promotion of insurance and pension business as well as the consolidation of the social security systems in these countries. All such activities require strong technical support typically offered by the actuarial profession. Consequently, there has been a strong push for actuarial training in these countries.

In this spirit, as part of the socioeconomic reform in Kazakhstan, and in order to promote insurance and pension businesses, the Kazakhstan government planned the introduction of insurance laws and regulations in 2000, requiring the certification of actuarial reports issued by the insurance companies by qualified actuaries. Since there were no trained actuaries in Kazakhstan, there was the urgent need to train a group of qualified actuaries to perform the actuarial valuations. To expedite the process, it was decided that the initial qualification process would consist of two examinations covering the basic actuarial principles and mathematics, and



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providing an overview of the application of these principles to the various lines of business involving actuaries. Each of these two Qualifying Examinations would be given following an intensive three-week seminar on the respective subject. Persons passing both Qualifying Examinations would be certified by the Insurance Supervision Division of the National Bank of Kazakhstan as Qualified Actuaries, with a license for two years. Renewal of the license would be subject to further actuarial training provided in subsequent years.

Preparation

The training courses were jointly sponsored by the USAID and the National Bank of Kazakhstan. Major funding was provided by the USAID. The instructors were Charles McLeod and Michael Sze.

Much time and effort were spent formulating the topics to be covered by each of the seminars, selecting the proper text for the course, planning out the specific topics covered by the seminars, the timetable, and the standard of the tests and examinations. Robert Brown, Norm Crowder, Mo Chambers, and Rachel Brody of the Society of Actuaries, and Chris Daykin and Hugh Sutherland of the British Institute of Actuaries provided much assistance and advice. Sam Broverman and Mike Braunstein helped in the choice of teaching material, and Mad River Books provided much needed discounts on the textbooks and the calculators.



After much discussion, it was decided that the first seminar, and the Qualifying Examination — Part I, would cover the Theory of Interest and Life Contingencies. The standard of the tests and examinations would be patterned after the Enrolled Actuaries Examination Part IA in the United States. The second seminar, and Qualifying Examination — Part II, will cover major topics in individual life and health insurance, group life and health insurance, property and casualty insurance, reinsurance, pension and annuities, social security, and investment.

Since there is no international examination which covers all these topics, a separate set of tests and examinations had to be devised by the instructors. The passing standard would be close to the international standard. In view of the shortage of time, it was also decided that the medium of teaching would be English. No translator

would be provided for the lectures, nor for the tests. The textbooks and calculators were provided

free to the students. Students of each course who successfully completed the course and passed the examination were allowed to keep the textbooks and the calculators.

Format of the Training Course

The main difficulty of these training courses was the shortage of time. The material covered in the first training course was typically

covered in two full-term semesters in universities in the United States. The material for the second training course required at least four full-term seminars. Typically in the United States, 40-50% of candidates for each of these examinations would pass.

In view of the extreme shortage of time, it was decided to make the training courses very intensive. There would be five days of lectures and workshop each week, followed by an optional review session each Saturday. On each week-day, there would be two lectures in the morning, followed by a test in the afternoon, and review workshop after that. Both training courses were highly technical and computation intensive. In the first course, the students were provided with financial calculators to facilitate the necessary calculations. In the second course, many of the afternoon workshops were conducted in the computer center. Most test questions required computer solutions to practical problems in insurance and pension.

Results of the Seminars

Attendance was excellent. Forty-two students signed up for the first training course, and eighteen students signed up for the second course. Most of them attended all the weekday lectures and the optional Saturday reviews.

The first training course was given in May 2000, and was particularly difficult for most students. The intensity of the course, and the level of difficulty of the tests and examinations were far beyond the expectations of all the students. It was a cultural shock for them.

However, despite tough tests every day, and very disappointing test scores in the initial week, the

students persisted, studying harder and sleeping less each day. In the end, thirty-eight students took the Qualifying Examination — Part I, and sixteen of them passed. A short review course was given by Charles McLeod in the last week of June, and a makeup Qualifying Examination — Part I was given on July 1, 2000. Eighteen students took the examination, and five of them passed. Most of the passing students of the makeup examination were borderline failures in the May examination. Upon careful review of the results, we came to the conclusion that, because of the highly technical nature of the subject material, it was very difficult for students to pass these examinations without intensive training.

The mode of the 18 students for the second course was substantially different from that of the first course. They still worked very hard. Most students showed up on each weekday and all the optional review Saturdays.

However, the students were more relaxed and self-confident from having gone through the tough training process. They also seemed to have developed a bond with one another for having struggled through hardship together. Of all the good things that happened in the training courses, this is the most gratifying outcome for me as an instructor. This bond is vitally important for a profession. It is through this type of mutual respect and cooperation that a profession can work together and face up to the challenges that will unavoidably present themselves, especially to a young profession such as this in Kazakhstan.

A Qualifying Examination — Part II was given on July 29, 2000. The examination questions were chosen not just to test their understanding of the rules for various insurances and pensions, but to test

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their ability to solve practical problems under simulated situations. All eighteen students took the examination. Sixteen students passed. These students will be certified as the first group of Qualified Actuaries in Kazakhstan as soon as the final regulations concerning qualification have been adopted in Congress. (My understanding is that the Congress has just passed the final regulations on the Qualification Process in December 2000). These students have proven themselves to be professionally competent to carry out actuarial functions under practical circumstances. As their instructor, I am very proud of them, and honored and privileged to be associated with such a group of dynamic, young professionals.

Some Successes

The greatest success lies in the fact that we have produced the first group of properly trained actuaries who are able to make independent decisions to solve real life actuarial problems.

Actuarial mathematics is very computation intensive. Instead of teaching students all the tricks and shortcuts to circumvent computations, as is typically done in the conventional approach, we emphasized the use of financial calculators up front in the first course, which have many of the financial

functions pre-programmed. By so doing, we were able to avoid teaching a bag of tricks and concentrate on the ideas behind the computations instead.

This concept was carried further in the second course, where most of the tests and examinations were computer based. With the use of computers for each student in this course, many problems and assignments given to the students were reflective of real life cases. In the tests and the examinations, more complicated questions were set, requiring students to set up programs to solve real life problems under the time constraint of the examination.

Some Failures

The scope of material covered in the second training course included individual life and health insurance, group life and health insurance, property and casualty insurance, reinsurance, pension, social security, and investment. There was too much information for a three-week training course.

Because of the vast scope of the material, we were not able to find a very good text that covered all the material adequately. The text used was not well received by either the students or the instructors. In the end, we had to supplement the material with a lot of our own notes and materials from other sources.

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However, such supplements took up much extra time and energy of the instructors. As a result, there were fewer tests given to the students in the final week. This deprived them of part of the much needed drill on their computational skill. Some changes are required.

Some students' English skill was not adequate. Many students requested translating the examinations into Russian. We were only able to translate the multiple choice questions and not the computer programs into Russian, because the Excel functions in Russian are slightly different from those in English.

If we tried to translate the computer programs into Russian, we ran the danger of unintentionally setting wrong questions for the students.

One of the students might have failed the course because of the language handicap.



However, even the partial translation was achieved for a substantial price.

Because of the short timing involved, many students were requested to assist in translating some relevant texts and study notes into Russian to help the English deficient students to prepare for the Final Examination.

Many students were sacrificing valuable study time to assist this small group of students. The translation, the typing, and the merging of the translated text into the computer database created tremendous work for the support staff, and took away much needed time for

reviewing and preparation of the Final Examination papers.

Consequently, there was some confusion on the final examination day. On that day, two computers were found to be not functional and had to be replaced at short notice. Five diskettes containing the computer problems for some students were found to be defective and needed to be replaced, with the questions regenerated on examination day. Consequently, the entire examination was delayed by fifty minutes. Such confusions could be avoided with less last-minute administrative burden and more leisurely preparation.

Some Comments

The training program has achieved a level of success higher than anybody's expectation. Kazakhstan needs to have qualified actuaries. So, we embarked on this training program. Initially, we hoped to be able to train ten qualified actuaries.

In the end, we got sixteen professional actuaries. We owe the success to the dedication of the students. Anybody involved in the training program knows how hard these students worked and how much sacrifice they made.

The scope of material covered in the second course is far too extensive. By trying to cover too much, we may end up getting less. For future trainings, the second course should be split into two separate courses: one on insurance, and the other on pension, social security, and investment. Specific texts may need to be written for these courses. Time should be allotted both to the

preparation of the texts, as well as for teaching the courses.

There is a critical shortage of actuarial reference books in Kazakhstan. Actuarial students who have questions on life insurance and pension search in vain for reference materials. This critical shortage must be remedied as soon as possible. Unfortunately, all these reference books are very expensive, many of them costing over US\$100 each. It is too expensive for the actuarial students here. But the students need these books and the knowledge they contain for their daily work. A library needs to be set up.

Concluding Remarks

Many people contributed much to the success of the project. Beside all the consultants mentioned in the Introduction, the administrative support has been tremendous. Paul Pieper, Richard Webb, Laura Zielinger, Barbara Hamilton, and Alma Kasymova provided invaluable practical guidance and support. We had a good start. Much follow-up work is needed.

- A Kazakhstan Actuarial Association should be formed with all its by-laws and code of conduct, and standard of practice, and its education/training program. The target should be to help the organization gain international recognition in due course.
- Continual training is needed in the next three years to raise the standard of the current actuaries in Kazakhstan to the international level.

- Repeat of the current basic training is needed to produce more fresh blood for the industry.
- There is a critical shortage of actuarial reference books in Kazakhstan. This critical shortage must be remedied as soon as possible. A library needs to be set up. Some planning for that is imminent.
- Representatives of the KAA participated in the International Actuarial Association seminar in Hungary and made a good impression among other participants.
- An actuarial library is set up in the National Bank of Kazakhstan. Books are being acquired to beef up their collection. This is not an easy task for a developing country such as Kazakhstan. International assistance will certainly be greatly appreciated.
- Further trainings are planned in 2001. There will be a repeat of the two basic courses respectively in March and June of 2001. There will be an advanced course in October 2001.
- Kazakhstan is now in the process of firming up its social security pension payment procedure and its insurance reserve regulations. Much professional guidance is needed.
- Kazakhstan currently does not have soundly constructed actuarial mortality and morbidity tables necessary for each area of actuarial calculations. The government actuaries are starting to collect data to construct such tables. However, there is a lack of experience on such constructions. Much guidance is needed.

Follow-up

Many progresses have been achieved since my previous report.

- The Kazakhstan Congress has approved all regulations regarding the Qualification procedure. The 16 actuaries are all certified.
- The Kazakhstan Actuarial Association (KAA) has been formed in September, 2000. Five

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My Trip to Budapest

by Norm Crowder

In late September, Howard Bolnick and I represented the Society of Actuaries at a meeting in Budapest, Hungary for leaders of the actuarial societies of the emerging nations of Eastern Europe. This is one of a series of seminars sponsored by the Advice and Assistance Committee of the International Actuarial Association (IAA) every 18-24 months, to assist these new actuarial leaders in defining their educational and professionalism needs as their financial services and social security systems evolve. The principal organizers of these conferences have been the Institute of Actuaries staff and Chris Daykin, the U.K. government actuary.

In Budapest, there were some 26 countries represented from the Eurasian region. Some are associations that are well into the development of their educational programs, such as Poland, Hungary, and Russia. Others have just been organized in the last 1-2 years. The newest was Kazakhstan which had just certified its first eight members as actuaries as the result of an actuarial training program organized and taught during the summer of 2000 by Mike Sze and Charles McLeod, Canadian members of the Society.

This three-day seminar, which was hosted by the Hungarian Actuarial Association, consisted of reports from the various associations on the state of progress and issues they face in developing their educational and other processes. These presentations yielded much useful discussion about ways to move forward on many issues. Some groups intend to develop academic programs for teaching actuarial science. Others intend to facilitate use of the Society and Institute exams. Most will likely develop a simplified system of basic actuarial education and examinations. All of these associations are ultimately seeking to meet the IAA's minimum educational standards, which are effective in 2005. The Society and Institute representatives were asked to offer insights and advice where helpful.

Other issues that were discussed were the development of a code of professional conduct and a disciplinary process. In most of these countries, these matters are evolving slowly with the basic education process having a top priority.

The participants considered this Budapest meeting a very worthwhile effort. The IAA plans to hold the next such conference in spring or summer of 2002. I believe that the Society should continue to support these IAA conferences and to continue to build its early efforts to offer support and assistance to these emerging actuarial societies.