



SOCIETY OF ACTUARIES

Article From:

# The Actuary

March 1986 – Volume No. 20, Issue No. 3



# The Actuary

The Newsletter of the Society of Actuaries

VOL. 20, No. 3

March, 1986

## SOCIETY OF ACTUARIES STAFF ORGANIZATION

By John E. O'Connor, Jr.  
Executive Director

The Society of Actuaries membership now totals close to 10,000! As you might suspect with the Society becoming increasingly larger, more specialized and active, it is often difficult for the membership to meet the office staff or even realize the full range of services that the Society office routinely provides for its members. Therefore, I would like to take this opportunity to introduce you to our staff and the services that we provide for you.

In addition to myself and two administrative assistants who compose the Executive Division, the office is organized into seven divisions. These are: Education, Education and Examination Support Services, Meetings, Finance, Research, Communications, and Information Services Center. Within this departmental structure, each division has its own set of responsibilities in conjunction with various committees. However, it is quite common for several divisions to work together and support each other on a particular project.

Let me briefly describe each division and its primary responsibilities.

### Education:

This department is headed by Linden N. Cole, FSA. Education is one of the primary functions of the SOA, and the work of the Education and Examination Committees, supported by this department and its staff, is a key to the overall strength and growth of the actuarial profession. In his capacity as Director of Education, Linden works closely with the Society's various education committees, including Education

(Continued on page 3)

## COMPARING THE ACTUARIAL EXAMS

By Rick A. Roeder

When you were spending countless hours studying for actuarial exams, did you ever wonder why you had been foolish enough to select this profession when other professions such as accounting and law appeared to offer easier paths to receiving professional credentials? I surely did. I gave myself the opportunity to test whether this thought was mere wishful thinking in a recent six-month period.

My practice has gotten involved in additional areas of tax-planning other than those normally encountered by an actuary. Being a believer in credentials, I thought that becoming a CPA would be consistent with this belief, and a useful marketing tool to boot. So, I decided to take the CPA exams, much to the incredulity of certain associates and friends. I want to share my observations on the many differences between the CPA and actuarial exams.

First of all, you should realize that I am not an ideal barometer by which to compare the two sets of exams:

1. When I took the actuarial exams I was usually one of the youngest in the room; not so for the CPA exams where I was one of the "senior citizens" and "exam seasoned" from my actuarial background.

2. My formal education was stronger in actuarial science than in accounting.

3. My attitude in studying for the two sets of exams was different. I studied hard for the actuarial exams, while my commitment to the CPA exams was limited to self-study on a basis that did not interfere with work or social commitments (and the 1984 World Series, as it worked out. My favorite baseball team, the Tigers, played the local

(Continued on page 6)

## ANNUITIES USED IN SETTLEMENT OF PERSONAL INJURY LAWSUITS

By Robert C. Blattenburg

At the outset it should be said that this article is not intended to be a learned or technical treatise. Rather it is a brief description of one of the fastest growing segments of the life insurance industry — the so-called Settlement Annuity. It is presented out of the experience of the author, who has had a hand in the development of the methods used in rating and handling these annuities since the inception of current usage. The author was Actuary of one of the companies to first issue such annuities, he has been an advisor to others, and he has actually settled several hundred personal injury lawsuits through the use of Settlement Annuities.

The use of annuities as part of a financial package in the settlement of a claim of one person against another is not really new. The Roman Senate granted a life income to a claimant, and about 50 years ago annuities were used in settlement of a few of the Thalidomide cases. However, the use of the annuities issued by life insurance companies to settle personal injury lawsuits did not really begin until 1970. Since then the growth rate of the use of this approach has been tremendous. Only \$150,000 of premium was generated in 1970, but over \$2,000,000,000 in 1984. Almost a 100% annual growth rate sustained over 14 years is indeed awesome.

The reasons for this growth are not difficult to see, though we may wonder why it didn't happen earlier. For the injured person a life-time income makes much more sense than a lump-sum settlement. The liability insurer likes the

(Continued on page 5)

## Major League Baseball

(Continued from page 4)

ould be of help to informed judgment. A comparison of  $V_K$  with  $V_B$  tells something about the wisdom of sacrificing with one on and none out, while the two-on one-out sacrifice can be partially evaluated by comparing  $V_W$  and  $V_N$ . Such comparisons do not provide definitive answers because they do not take into account the possibilities of either unsuccessful or overly successful sacrifice attempts, but they provide useful information nonetheless.

There is another potential use with greater possibilities. Just as a stock market average permits the comparison of an individual stock against the average, the  $V_s$ s make possible the comparison of one offensive player against the average of all, and hence against any other. Moreover, one average can include all of the skills of the baseball offense, baserunning, runs batted in, as well as the more commonly calculated "batting" average.

Let a player's "offensive performance index" be calculated by adding (algebraically) his "values added" and dividing by "times at bat". A value added is  $V_s$  for the state after he has batted + any runs indicated by the attachment to  $V_s - V_s$  for the state in which he came to bat. Value added will normally be positive if the batter gets a hit, draws a walk, or especially if he drives in runs; but will be negative if he makes an out without advancing a runner, or especially if he hits into a double play.

Baserunning skill too is measured by value added. With two out a runner on 1st successfully steals 2nd. He is credited with  $V_S - V_R$ , whereas if he fails his value added is  $-V_R$ . Whenever state changes, but the batter is not involved, the value added is charged or credited to the baserunner, and treated as if it were a part of his earlier time at bat. In relatively infrequent circumstances it may be appropriate to credit part of the value added to the batter, another part to the baserunner. As an example, in state B the batter singles, and the runner

on 1st advances to 3rd. If in the opinion of the official scorer the extra base is more the result of the baserunner's speed than the place to which the ball was hit,  $V_E - V_B$  might be credited to the batter,  $V_F - V_E$  to the baserunner now on third.

## Summary

The analysis of the game of baseball, in terms of a Markov chain, shows promise. The Markov theory is based on the premise that the chain has no memory, so that the transitional probabilities starting from state  $s$  are independent of what occurred before. Whether this is truly characteristic of the game of baseball may be difficult to determine, but it seems to be a reasonable assumption.

The author knows of no attempts to quantify the transition matrix or the potential run values indicated here by  $V_s$ . Such an attempt would seem to be the next logical step. If successful, the spin-offs might be surprising. □

## Settlement Annuity

(Continued from page 1)

definiteness of the claim settlement, and that fact that the claim will be lower by the action of interest. The life company finds that substantial premium is produced in big chunks, and the annuity payments have good cash flow characteristics. The Settlement Annuity seems to be one of those synergetic arrangements in which everyone gains.

The life insurance company issuing such annuities must answer two main questions as to pricing. What interest rates and what mortality table are to be used in the rate development, and how are persons with life-impairing injuries to be evaluated? Other questions are expense factors, profit margins, the types of annuities, and any limits that the company may need to impose.

An Actuary or life insurance executive involved with this business, or considering becoming involved, must realize that theoretical assumptions are of no value unless business is produced.

To produce business, by far the most important factor is the premium quoted. In this field the lowest premium is vital — perhaps to a greater extent than in most other insurance lines. The premium is being paid by a casualty in-

urance company, which has more than a "casual" interest in keeping its claim costs low. The casualty company will (and should) demand the lowest possible premium from the life insurance industry.

The agent or broker presenting the rates of a life insurer has not only an ethical responsibility to present the lowest rate (assuming the life companies available are all well rated and with good financial structure), but a very practical reason for doing so. If he doesn't, someone else will! And if someone else does, the agent will not only lose this case, but the casualty company as a customer for future cases. Unless a life company is willing and able to be price competitive, there is no reason for it to be in the field.

This does not mean that a company whose rates are not the lowest will get no business at all; nor that the company with the lowest rates will get all of the business. Service to the agent, flexibility, and cooperation are important, and if rates are reasonably competitive will attract a certain amount of business. Poor service, inflexibility, and lack of cooperation will drive away business despite a low rate. Rate structures are not static, so one life company may be the lowest bidder on one case, another

life insurer on the next.

There is one new development. The author is now engaged, full-time, as an expert witness testifying in court trials as to Settlement Annuity costs. This testimony seems to be very successful in reducing huge lump-sum verdicts to more reasonable levels. Judges like it, juries can understand it, and the casualty companies truly appreciate the savings in claim dollars.

The Settlement Annuity field is fast rolling, fun, frightening at times, amazing as to the premium volumes than can be developed — and always exciting. □

## WANTED: M.A.A. REPRESENTATIVES

The Subcommittee on Relations with Colleges, Universities, High Schools and Related Matters is seeking additional volunteer FSA's to serve as local representatives for the Mathematical Association of America. The function of these is to promote the math contests sponsored in part by the Society and the MAA. They are called upon from time to time to disseminate MAA information in the local areas. Their purpose is to foster widespread cognizance of MAA activities. Interested persons can contact Bob Musen at CIGNA (203-726-5331). □