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1979 AGENT TERMINATION TABLES

by Joseph R. Brzezinski

LIMRA has just conducted an informal study of agent terminations, collecting information (for all causes combined) (a) by both contract and calendar years for full-time career agents hired during the past 15 years, and (b) by calendar years in attained age groupings for agents hired more than 15 years ago. The 74 contributing companies were sent summary results during 1980.

Since then, effort has been devoted to smoothing the observed results and creating agent service tables by contract year. This smoothing was done graphically. The early termination rates are accurately reproduced, but rates for later contract years had to be smoothed more heavily, primarily to remove apparently aberrant heaping of terminations in the 11th to 14th years attributed to industry compensation and management practices.

Distributions of agents by age at hire were supplemented by the following assumptions:

- 1965-1970 Basic Ultimate Mortality
- 6-month Disability, 1971 Modification to 1964 Commissioners Disability Table
- Various assumptions about agent retirement.

Five multiple-decrement service tables, being called the *Brzezinski* 1979 *Agent Termination Tables* were produced. One of these was for agents of multiple-line companies, one for combination companies, the other three show the experience of companies not in those special categories, divided into three performance segments. Each of these segments reflects the experience of, as closely as possible, the same number of entrant agents.

Information useful to actuaries for creating their own tables for valuing

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IN PRAISE OF COMMUTATION FUNCTIONS

Let me be your servant:
Though I look old, yet I am strong and lusty.
As You Like It, II, iii

Ed. Note: In FIASCO, our London sister-journal, we read that Mr. Gary Chamberlin, an Institute member, had written a paper, The Proficient Instrument, *showing "how the Pension Funds actuary can add a new dimension to his choice of actuarial bases." Mr. Chamberlin kindly sent us a copy of his paper, which was first presented to the Institute of Actuaries Students' Society on November 18th, 1980. We undertake no more than to introduce its theme here, and will gladly send the text to the first reader who expresses enthusiasm for reviewing it more thoroughly.*

The paper's full title is: THE PROFICIENT INSTRUMENT: A New Appraisal of the Commutation Function in the Context of Pension Fund Work. The commutation function, says its author, is part of the actuary's basic equipment, guiding and assisting him in many of his calculations. As a whole, these functions form a powerful algebraic system for producing approximations to integrals. The computer has led many actuaries to disclaim the commutation functions which have served them so long and so well. But both the commutation function and the computer are mathematical instruments and can be made to work together well, performing their separate and complementary functions.

The author's way of highlighting the commutation function's continuing usefulness is to focus attention on the "N-Year Discontinuance Valuation." Says he,

> "In such a valuation, by contrast to the more usual Aggregate method, it is assumed that the fund will be voluntarily wound up after the passage of the given period of

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PROPOSAL FOR A NEW CONSUMER INDEX

by Barnet N. Berin and Lloyd S. Kaye

Ed. Note: These are excerpts from a complete article in THE MERCER BULLETIN, Nov. 1980. You may request the full text from Mr. Berin at his Year Book *address.*

We're Doing It Wrongly

We "overmeasure." Changes in the Consumer Price Index and other economic indicators influence business and investment policies and have a psychological effect on the marketplace as well as on consumer confidence. These statistics are converted into equivalent annual rates of return, assuming 12 successive months of the *same* experience and interpretative articles are written. Such commentary leads to news conferences, further interpretation, and the introduction of counter statistics indicating that the unfavorable trend may have been reversed. Quietly, months later, the statistics may be revised to correct an error (or) an abberration that, if known earlier, would have led to different conclusions.

(And) we measure the wrong statistics as a rate of inflation and stubbornly persist in doing so. The CPI concept of tracking a defined list of goods (with housing handled in an unusual fashion) made sense during World War I when checkbooks were less prevalent and credit cards non-existent.

What We Should Start Doing

To de-emphasize this concentration on a single month, we should introduce 12-month moving averages, (making) the latest month's experience a beacon only if supported by the trend of several preceding months.

Now it is possible, indeed necessary, to develop an exact CPI for an individual or a group. With a carefully chosen.

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Consumer Index

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should reflect an altogether different pattern of home purchases, transportation costs, tax payments, etc.

Implications in Forecasting

Many otherwise thoughtful studies routinely project rates of inflation into the future without considering the ramifications. Many governmental agencies and private institutions project inflation rates in excess of 10% for periods of 20 or 30 years or more. But what does this mean? Can our society remain as it is today if we have double-digit inflation far into the future? If salaries and expenses and the price of bread and clothing move at this rate, what about other costs? What about the financially weak industries? What about the cost of doing business? What about lending institutions? What about the role of government? A far better projection technique is to identify a plausible *range* of possibilities, and project not one answer, but a range of possible answers. This will, of course, require some interpretation but that would be a salutory consequence of the exercise.

Let's Get To It

We have fallen into a habit of measurement that should be discussed, debated and corrected. We measure badly and yet draw conclusions from these measurements that affect everyone. The degree of economic change experienced recently, and likely to continue for some time, warrants a new look at how we measure and how the results are interpreted and used. The Bureau of Labor Statistics should be given the resources necessary to develop a new consumer index based on what people actually spend and not on a "typical" market basket of goods and services. □

Council of Professional Associations on Federal Statistics

We announce with pleasure that our own Robert J. Johansen has accepted the post of Secretary of the Executive Committee of COPAFS. The Council represents 12 professional associations, including the Society of Actuaries. It was organized to help increase the associations' involvement and that of their members in federal statistical affairs.

THIS MONTH'S QUERY FOR ACTUARIES

This is the first, in a probably irregular series, of questions that we'll put to our readers. All that we seek are brief, by no means comprehensive, responses. These will be assembled into an article, giving credit to those whose contributions have been used.

Query: *The Harvard Medical School Health Letter* has come out with a piece of advice to its readers entitled, WHO SHOULD I HAVE FOR MY DOCTOR?. Its test categories are: Background, Keeping Up, Reputation, Accessibility, Practice Patterns Relationship To You, Demeanor — closing with thoughts on parting company from a physician who is judged not to have met minimum standards.

Please send us, to our masthead address, an idea (or two or three) that you consider suitable for inclusion in an advisory essay to members of the public on WHOM SHOULD I HAVE FOR MY ACTUARY?

1979 Agent Termination Tables (*Continued from page* 1)

non-vested benefits is available by writing to the author at LIMRA, Box 208, Hartford, CT 06141.

The table herewith summarizes our new tables and compares them with the *McConney-Guest Modified*, (*TASA* XLIII, 307), and *Equitable* 1949-1960, (*TSA* XV, 458), tables. Although giving a general picture of the range and patterns of agent termination experience in the industry today, our values should not be interpreted as "industry averages," and cannot be applied safely to any single company without adequate consideration of that company's own experience.

Comparison of Agent Termination Rates

			Brzezinski 1979 Tables				
			Ord. Cos., not Mult.—Line				
Contract Year	*McConney-Guest Mod.*	*Equitable 1949-60*	*Best*	*Middle*	*Worst*	*Multiple Line Cos.*	*Combination Cos.*
1	.430	.476	.450	.635	.700	.240	.600
2	.370	.376	.400	.442	.565	.170	.490
3	.285	.296	.300	.315	.385	.105	.360
4	.225	.237	.210	.242	.310	.060	.280
5	.185	.187	.150	.190	.250	.040	.225
6	.152	.147	.130	.155	.200	.037	.185
7	.130	.117	.110	.125	.175	.032	.150
8	.115	.097	.095	.116	.150	.027	.125
9	.100	.088	.087	.108	.130	.023	.100
10	.086	.078	.079	.100	.125	.020	.094
15	.032	.045	.050	.070	.100	.009	.070
20	.025	.023	.042	.042	.079	.015	.042
25	.025*	.011*	.045	.045	.081	.023	.045
30	.037*	.016*	.051	.051	.110	.032	.051
40	.085*	.039*	.113	.113	.313	.092	.113
50	.183*	.101*	.220	.220	.442	.218	.220

* Deaths only.