DISCUSSIONS OF PAPERS READ AT THE MAY 1959 MEETING

A REVIEW OF THE EXPERIENCE OF MASSACHUSETTS WORKMEN'S COMPENSATION EXPERIENCE RATED RISKS

BY

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DISCUSSION BY R. P. GODDARD

In these days of Poissons and negative binomials, Mr. Stevens' paper, couched as it is in English words and Arabian numerals, comes as a welcome change of pace. Mr. Stevens brings out the fact, not quite so well known as it ought to be, that the Workmen's Compensation Experience Rating Plan is something like alcohol, it lifts you up (if you're a bad risk), and it lets you down (if you're good). The net result is that the ultimate loss ratios which determine underwriting results (loss ratios based on premium at adjusted rates) are just about as good for debit risks as for credit risks, with not too much variation throughout the whole gamut of experience modifications. The success of the various experience rating plans in exalting valleys and laying low the mountains and hills is well demonstrated in the table below, which begins with a study made by Mr. Dorweiler of New York data for policy year 1931, and continues with similar tabulations made by the Massachusetts Bureau and the New York Board since that time.

		Ratio of Losses to Standard Premium		
State	*Policy Year*	*Credit Risks*	*Debit Risks*	*All Experience Rated Risks*
New York	1931	56.2	57.9	57.0
Massachusetts	1937	43.4	46.8	44.8
"	1938	50.8	49.8	50.1
"	1939	45.9	52.6	48.8
"	1940	45.9	51.4	48.3
"	1941	46.7	50.2	48.2
"	1942	46.7	49.7	48.1
"	1943	52.0	52.2	52.1
"	1944	53.0	54.2	53.6
New York	1941 (2nd half)	54.5	53.6	54.1
Massachusetts	1955 Intrastate	48.1	53.2	51.0
"	1955 Interstate	48.6	49.7	49.1
New York	1956	53.0	54.6	53.7

The New York data for 1956 includes risks subject to interstate rating with the modification based on interstate experience. For the Massachusetts risks, both intrastate and interstate, Mr. Stevens developed modifications based entirely on Massachusetts experience.

Of the thirteen sets of risks exhibited in the above table, the credit risks had a higher average loss ratio in only two instances, 1938 (Mass.) and 1941 (N. Y.), though in 1943 there was not enough difference to talk about. If the proper credibility were given to risk experience, we would expect a more even distribution of high and low loss ratios between the two types of risk. This seems to be happening in New York, as the following breakdown for 1956 shows:

Manual Premium Size Group	*Credit Risks*	*Debit Risks*	*Total*
Under 500	68.7	56.1	64.9
500 — 999	55.7	59.5	56.7
1,000 — 2,499	51.1	57.5	53.6
2,500 — 4,999	56.6	52.2	54.6
5,000 — 9,999	52.8	53.2	53.0
10,000 — 49,999	53.4	52.7	53.1
50,000 & Over	51.4	55.5	52.9
Short Term	49.5	63.8	57.5
Total	53.0	54.6	53.7

With three out of the eight sub-groups showing higher loss ratios for credit risks, no revision of credibility constants seems necessary in New York. A similar breakdown for Massachusetts might prove valuable.

It should be remembered, however, that all of the tabulations of this type have been based on first reports of experience, and the results could be different on the fifth report. In general, the larger risks (which usually have the greater credits) tend to show a greater upward loss development as the experience matures, so that it is quite possible that the ultimate reports would show very little difference in the desirability of credit and debit risks.

Mr. Stevens devotes some time to a discussion of the 1.03 off-balance factor which applies to each experience modification in Massachusetts. In most states, the credit off-balance is at least partially man-made, because the expected losses are usually higher than the actual losses. This was not true in Massachusetts in policy year 1955, but, even with the actual losses equalling the expected losses in the aggregate, the risks with greater credibility had actual losses low enough to produce an overall credit off-balance. If no correction factor had been applied to either rated or non-rated risks, the loss ratios would have looked like this:

Type Of Risk	*Loss Ratio If No Off-Balance Factor Had Been Used*
Rated — Intrastate	.525
Interstate	.506
Total Rated	.516
Non-Rated	.561
Grand Total	.525

With a permissible loss ratio of 60%, it is a bit difficult to determine which group of risks should be subject to an off-balance factor.