NEW YORK COMPENSATION RESERVE SCHEDULE R

BY

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At one time, not so long ago, Schedule P in the casualty annual statement blank was considered a fair guarantor of the adequacy of a company's loss reserves for liability and workmen's compensation insurance.

That was in the days when loss ratios and loss adjustment expense ratios rarely totaled 60 percent for liability insurance or 65 percent for compensation insurance, and claims examiners were reasonably confident that current reserves in these lines were reliable estimates of the eventual costs of pending cases.

More recently, mounting premiums in these lines have been losing in a race to keep ahead of the more rapidly mounting losses; and today's loss reserves are being buttressed with this and that contingency reserve to insure a carrier's ability to meet the costs of judgments and awards that are unpredictable and entirely without precedent.

The effect on Schedule P has been that few carriers in recent years have been able to show statutory reserves in excess of case estimates in either liability or compensation insurance. Statements of loss reserve liabilities are now almost universally the accumulated totals of case estimates.

The consequence is that members of the casualty industry are busily, almost urgently, comparing notes on methods of insuring adequacy of loss reserves. Analysis of loss reserves, and testing for their adequacy, have become favorite topics at casualty insurance gatherings. Rightfully, the loss of the cushion in Schedule P has become a matter of great concern.

It seems appropriate, then, to examine an official workmen's compensation reserve schedule, other than Schedule P, that attempts to meet the tests considered desirable by the experts and that contains a few additional gimmicks to promote adequacy. This is Sechedule R, required of mutual casualty carriers domiciled in the State of New York on their New York State workmen's compensation business only.

Schedule R replaces Schedule P only in the annual statement filed with the New York State Insurance Department, and only on New York State workmen's compensation business. Thus, Schedule P is required of the New York mutuals in all states other than New York, and it is also required of them in New York on other than New York State business. They are willing to bear with these complications because of their pronounced preference for Schedule R.

Schedule R is fundamentally a reserve schedule based upon individual estimates of outstanding claims, and its chief requirement is that the claims be listed in detail in a variety of schedules according to claim classification defined in the Insurance Department regulations. It has been in effect since 1914, when the New York Workmen's Compensation Law was enacted. At that time a number of mutual companies were organized by groups of businessmen to insure their obligations under the new Act. Most of these new companies were "trade" mutuals, i.e., they were organized by interested business leaders in the lumber, brewing, utility, printing, and other industries to offer workmen's compensation insurance to employers in their respective fields. All of these insurance ventures represented closely knit groups of employers who were prepared to exercise close control of such matters as safety work, prompt and proper medical care, and rehabilitation of injured workmen. It was the opinion of insurance supervisory authorities, therefore, that the developed loss ratios in such insurance companies would prove to be greatly below the 65 percent demanded in a Schedule P reserve—an opinion that subsequently was proved to be justified. And under the circumstances, permitting these insurers to provide reserves more closely related to their actual losses would aid them, in their beginning years, to establish financial stability.

Schedule R, therefore, was formulated by the Insurance Department as the reporting standard for these mutual carriers; and it was so designed that it would enable the Department to maintain a close check on the adequacy of the reserves. The pertinent provision of the New York Insurance Law (subdivision 8, section 326) is as follows:

> "The loss reserves . . . under workmen's compensation policies, issued by domestic mutual casualty companies shall be computed in accordance with regulations made from time to time by the superintendent, having due regard for the character of such insurance and the adequacy of such reserves."

Note that the New York Department's loss reserve regulations of 1914 ran counter to the usual assumptions as to the necessity of Schedule P for newly organized companies: the minimum reserve feature of Schedule P had generally been considered the best safeguard for the solvency of a new company's operations, at least in the workmen's compensation line.

The total Schedule R reserve reported by a New York State mutual casualty company now consists of the following elements (the following description will perhaps be clarified by studying the exhibit appended to this paper):

1. Case estimates of all open compensation and medical claims with accident dates prior to the six-month period immediately preceding the valuation date, plus actuarial valuations of the indemnity costs of death and statutory permanent total claims occurring in that six-month period [Items 1, 2, 3, 4, and 11 of the appended exhibit].

2. A percentage contingency loading on the gross incurred indemnity cost of all open claims (which involve estimates rather than Compensation Board awards), except death claims, with accident dates prior to the latest six months. The amount of this loading represents the estimated amount of adverse development expected of such cases, and it varies from year to year in accordance with the experience of the individual carrier [Exhibit item 5].

3. A percentage loading on the medical reserves on all compensable claims with accident dates prior to the latest six months. The amount of this loading represents the estimated amount of adverse medical development expected in compensable cases, and this factor also varies from year to year [Exhibit item 6].

4. A flat dollar reserve for reopened cases, indemnity and medical separately, based on past experience [Exhibit items 7 and 8]. This reserve also includes incurred-but-not-reported cases with accident dates prior to the latest six months.

5. The product of an indemnity loss constant and the number of compensable cases, *excluding* death and statutory permanent total cases, with accident dates in the six months immediately preceding the valuation date, less the total of indemnity payments made on such claims; or the case estimates of indemnity reserves on such claims (including reserves for incurred-but-not-reported claims), whichever is greater [Exhibit item 9]. The indemnity loss constant [Column 6, item E], called the "E4 factor" in Schedule R, comprises the average indemnity cost of compensable claims for the reporting carrier, plus a loading for the indemnity cost of incurred-but-not-reported compensable claims.

6. The product of a medical loss constant and the number of compensable cases, *including* death and p.t. cases, with accident dates in the six months immediately preceding the valuation date, less the total amount of medical expenses paid on such claims; or the case estimates of medical reserves on such claims (including reserves for incurred-but-not-reported claims), whichever is greater [Exhibit item 10]. The medical loss constant [Column 6, item F], called the "H3 factor," comprises the average amount of medical expense per *compensable* claim for the reporting carrier, plus a loading for the medical cost of incurred-but-not-reported *compensable* claims.

7. The product of the number of pending non-compensable medical claims reported in the six months immediately preceding the valuation date and the average cost of such claims, less the total amount of medioal expenses paid on them. The average cost of non-compensable medical claims may not be taken at less than 10 dollars [Exhibit item 12].

It will be seen that the elements in Schedule R that promote adequate reserves are the contingency factors, the reopened case reserves, and the E4 and H3 factors. The eighteen loss development schedules required as of each September 30 by the New York Department for the calculation of these factors—different factors for each company each year—constitute Schedule R's greatest burden for both the carriers and the Department and are, perhaps, responsible for the Department's occasional suggestions that the carriers might now replace Schedule R with Schedule P. The New York mutual carriers have constantly indicated a marked preference for Schedule R, however, and their position gains some support in the current proposals to dispense altogether with Schedule P.

Calculation of the Indemnity and Medical Loss Constants: A brief description of the method by which Schedule R factors are calculated will demonstrate their function in the effort to obtain adequate reserves. Each year the carriers are required to submit to the Insurance Department a listing of the gross incurred cost, as of September 30, of each case appearing in the E4 schedule (latest six months' compensable cases) of the preceding December 31 statement, plus a listing of the gross incurred cost, as of September 30, of each incurred-but-not-reported compensable case with an accident date within the six-month period covered. Separate schedules for the indemnity costs and medical costs of these cases are required.

The sum of the developed indemnity costs of the E4 cases as of September 30 and the incurred-but-not-reported cases as of that date is then divided by the number of E4 cases in the original schedule. The result is an indemnity constant per case that takes into account developments on reported cases and on incurred-but-not-reported cases. [Exhibit item 9 (September 30 valuations of columns 3 + 5) ÷ (column 1).]

The H3 constant (the medical counterpart of the E4 constant) is obtained by dividing the sum of the developed gross incurred medical costs of the H3 cases as of September 30 and the incurred-but-not-reported cases as of that date by the number of H3 cases in the original schedule [Exhibit item 10, (September 30 valuations of columns 3 + 5) ÷ (column 1)].

Actually, the above operations are carried out each September 30 on the E4 and H3 cases of each of the two preceding years in order that note may be taken of developments affecting the average values per claim.

The Flat Dollar Reserves for Reopened Cases: Another schedule requires a listing of the additional incurred costs (indemnity and medical separately) since the preceding September 30 on reopened cases and incurred-but-not-reported cases with accident dates prior to July 1 of the preceding year. The reopened case reserves, indemnity and medical Column 6, items C and D, are based on a study of the respective schedules and of the corresponding ones for the three previous years as to indemnity and the two previous years as to medical.

The Contingency Factors: The companies are also required to submit to the Department lists of the developed gross incurred costs, valued as of September 30, of all open compensable cases (except death and statutory p.t. cases and E4 cases) that had been included in the December 31 reserves of the preceding three years. The summation of the developed incurred costs of such cases as of September 30 is then compared with the summation or their incurred costs as estimated at December 31 of the earliest of the three years called for, and the percentage increase (if any) becomes the contingency factor. (Claims representing Compensation Board awards are excluded from this survey).

For example, the incurred costs of open cases in the reserves as of December 31, 1948, 1949, and 1950 are compared with the developed incurred costs of these same cases at September 30, 1951. But, where any case appeared in the reserves in more than one of the three years, only its valuation at the earliest year is included for purposes of calculating the contingency factor. [Exhibit item 3, column 3 for the latest three years (less duplications) compared to developed costs at September 30].

Recently various refinements have been introduced into the calculation of the contingency factors and the flat dollar reserves for reopened cases. Weights have been applied to the indicated developments in such a way that adverse developments on the more recent cases affect the factors more than those on older cases.

Thus it can be seen that the application of the E4, H3, and contingency factors projects developments of any kind in the cost of compensable cases and counteracts any tendency to under-reserve. The contingency factor, particularly, has the effect of loading a company's reserves in the current period by precisely the percentage its experience has shown it to be under-reserved in the previous three years combined. If a company's reserves have developed favorably in the past, no contingency factor is applied in the current period.

It has been stated that the method of averages per reported claim as exemplified in the E4 and H3 schedules is undoubtedly useful but is not practicable "for standard test purposes since counts are not uniformly made by all carriers and difficulty would probably be experienced in completing the count at an early date."* It is probable, however, that for any company that accumulates its reserves on punch cards, a count of compensable accidents in a given period is one of the simplest of operations. For companies with a small volume of losses that accumulate their reserves by manual means, a count of compensable cases by accident date presents less of a problem than a hand tabulation of reserves by policy year, which is required in Schedule P. The theory of basing reserves for the most recent accidents on a method of averages per reported claim is based on the premise that it is difficult to estimate with any degree of accuracy the value of many, if not most, compensable cases less than six months old.

A further comment with respect to a method of averages: "Moreover, changes in coverage and in claim administration may from time to time influence the definition and cost of a reported claim."* This possibility would affect chiefly the calculation of an adequate E4 or H3 factor. For example, the figures upon which such calculations were based in September, 1948, were derived from the period prior to December 31, 1947, when both compensation and medical benefits in New York State were lower than they were for the year beginning December 31, 1948, at which time the new E4 and H3 factors were to be applicable. In the calculation of factors under such circumstances, the results obtained from the development schedules would be loaded by an amount sufficient to take care of the increase in benefits.

The New York Department, in its latest review of experience submitted by the carriers, has added a further precautionary element to its consideration of ultimate costs—namely, a trend factor. The reason is that in recent years originally assigned E4 and H3 factors have tended to lag somewhat behind developed experience figures for the losses to which they were applicable; this lag, it is believed, is due not so much to an original underestimation of reserves as it is to operation of intangibles stemming from economic inflation. Therefore, before final allocation to the carriers, these factors were increased by a loading of not more than 5 percent.

Incidentally, Schedule R also contains a loss development exhibit similar in nature to Schedule P, Part 5, except that the Schedule R exhibit is on an accident year basis only, and represents the latest ten years instead of six years.

Schedule R is not offered as a replacement for Schedule P. But if the supervising authorities ever do agree to dispense with Schedule P and to approve compensation reserves based upon individual estimates, they are likely to insist on suitable safeguards for adequacy. The E4, H3, and contingency factors in Schedule R in New York State are one answer to the problem that undoubtedly would be studied by the insurance commissioners.

* From the Report of the Committee on Compensation and Liability Loss and Loss Expense Reserves to the Casualty Actuarial Society, November 8, 1948.

SUMMARY SCHEDULE R

NEW YORK STATE WORKMEN'S COMPENSATION RESERVES
DECEMBER 31, 1951

Exhibit Item	*Text Item*	*Class of Case*	*(1) No. Cases*	*(2) Amount Paid 1951*	*(3) Estimated Total Incurred Costs*	*(4) Estimated Reserves*	*(5) IBNR Reserves*	*(6) Special Reserve Factors*	*(7) Schedule R Reserves*
(1)	(1)	All death & stat. perm. total	—	—	—	736,000	—	—	736,000
		Temp. or perm. partial disability							
		Accidents prior to 7/1/51							
(2)	(1)	Unpaid Comp. Board awards	—	—	—	37,000	—	—	37,000
		Pending cases							
(3)	(1)	Indemnity	—	—	2,012,000	1,347,000	—	—	1,347,000
(4)	(1)	Medical (incl. death and perm. total)	—	—	—	111,000	—	—	111,000
		Contingency reserves							
(5)	(2)	Indemnity (incurred costs, item 3, × factor A)	—	—	—	—	—	(A) .0121	24,000
(6)	(3)	Medical (reserve, item 4, × factor B)	—	—	—	—	—	(B) .0788	9,000
		Reserve for reopened cases							
(7)	(4)	Indemnity	—	—	—	—	—	(C) 114,500	114,500
(8)	(4)	Medical	—	—	—	—	—	(D) 21,500	21,500
		Accidents 7/1/51–12/31/51							
		Open and closed compensable cases							
(9)	(5)	Indemnity	602	29,000	264,000	235,000	66,000	(E) 666	372,000*
(10)	(6)	Medical (incl. death and perm. total)	605	30,000	71,000	41,000	18,000	(F) 164	70,000*
		Non-compensable medical cases							
(11)	(1)	Prior to 7/1/51				2,000			2,000
(12)	(7)	7/1/51—12/31/51	656	1,000	—	1,000	—	20	12,000†
		Total							2,856,000

* (Column 1 × column 6)—column 2, compared with (column 4 + column 5)
† (Column 1 × column 6)—column 2