

INSURANCE COST OF AUTOMOBILE BASIC PROTECTION PLAN  
IN RELATION TO AUTOMOBILE BODILY INJURY  
LIABILITY COSTS

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A discussion by Professor Keeton of the main provisions of *Basic Protection for the Traffic Victim—A Blueprint for Reforming Automobile Insurance* by Keeton and O'Connell (Little, Brown & Co., 1965) is included in this issue of the *Proceedings* as part of a panel presentation on Automobile Compensation Plans at the May, 1966 meeting of the Society. The complete text is available from the publisher.

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The problem considered herein is one of estimating costs for automobile basic protection insurance as it would be expected to affect New York State in comparison with present day bodily injury automobile liability insurance. Since the problem is unique, standard techniques and methods have not always been suitable to the task. Wherever practicable, however, techniques, methods and statistical data used have been grounded in developments recognized and accepted in insurance circles.

Two formal estimates<sup>1</sup> of cost have been computed, a high one based on automobile data inclusive of the cost effects of pain and suffering as currently recognized in the liability system and an intermediate one which reflects loss of income and economic costs computed from known workmen's compensation average claim costs in automobile accidents. The high estimate for \$10,000/\$100,000 limits of coverage is slightly less than

<sup>1</sup> For completeness, two additional estimates not included in the main text are contained in Appendix A. Appendix A incorporates eleven items which, less conservatively, may be of significance to Basic Protection costs.

costs for present \$10,000/\$20,000 automobile bodily injury liability insurance costs (89% of costs with both on a \$10,000/\$20,000 comparative basis). The intermediate estimate for \$10,000/\$100,000 limits of coverage is approximately 85% of present \$10,000/\$20,000 automobile bodily injury liability insurance costs; it would be approximately 76% of costs with both on a \$10,000/\$20,000 comparative basis.

The estimate derived from workmen's compensation figures excludes payments for pain and suffering. The cost estimate derived from automobile liability insurance data, on the other hand, is higher because it includes the cost effects of pain and suffering. It is as though some "added protection" coverage for pain and inconvenience under the basic protection system were included in this estimate. The estimate derived from workmen's compensation data, then, is the better estimate of the cost of basic protection alone.

Medical cost is approximately 25% of combined wages and medical of the basic protection plan. Moreover, the high indemnity cost of death and major permanent cases which number approximately 2% of the cases makes up approximately 21% of the total cost.<sup>2</sup>

At the \$10,000 limit per claim level, the average value of economic loss appears to be 81% of the combined value of all economic loss and pain and suffering. This is changed somewhat (85%) at the \$5,000 limit per claim level. On the other hand, above \$10,000 no estimates can be made from available insurance data except to note that currently applicable increased limits factors include both economic loss and pain and suffering; the increments charged are relatively moderate, possibly because of the uncertainty of both the existence and the value to be attached to pain and suffering as respects particular claims. For example, the premium charged for doubling the coverage from \$5,000/\$10,000 liability limits to \$10,000/\$20,000 liability limits is 20%; from \$10,000/\$20,000 to \$25,000/\$50,000 (an increment of three times the \$5,000/\$10,000 coverage) it is an additional 16 percentage points of cost.

The cost of the basic protection plan was first considered from the standpoint of present day liability or tort costs in the aggregate; on this there could be superimposed necessary adjustments and modifications determined from sample surveys. In the light of the wealth of material which, by diligent digging, may be extracted from more complete and publicly available data reported by insurers, motor vehicle authorities and

<sup>2</sup> The dollar amount of interest aggregated by periodic payments is not significant in relation to the other factors entering into the computations and has therefore not been included in the derivations.

others, it became apparent that such material encompasses, if not all relevant automobile incidents, at least many more automobile incidents for a given period of time than does a sample of several hundred cases. For this reason, the initial approach was reconsidered and modified to encompass pertinent insurance and reported motor vehicle data together with such other elements as census data which bear on economic costs. Further, the information developed has been converted to a unit cost basis so that more ready comparisons may be made with current insurance costs. It is believed that this approach may afford a practical method of comparing premium determination under a fault system with that under the basic protection system.

Consideration was given to various elements of the insurance premium. It was concluded that for cost purposes there was no basis for assuming the marketing system of insurance would be different from the current marketing system. Accordingly, the calculations have been developed on this basis; if the basic protection system were to be accompanied by marketing changes, then these would have to be separately reflected.

The volume of New York State automobile bodily injury liability insurance premiums in 1964 amounted to \$585.3 millions for all insurers, which, assuming the intermediate savings estimate of 15% under the Basic Protection Plan, yields an annual savings of \$87.8 millions.

In carrying forward the estimates of unit costs under the present liability system and the basic protection plan, attention has been directed to losses and loss adjustment expenses to the exclusion of other costs such as production expenses (commissions and other acquisition), taxes, or insurers' general expenses (policy writing, record keeping, etc.) Nevertheless, for completeness, it is well to note these elements as part of the overall premium structure generally used by the leading stock and mutual insurance ratemaking groups. The expense and profit or contingency provisions which are periodically revised to reflect actual expenses are approximately as follows:

Premium		100.0%
Production expense	18.5%	
Tax	4.7	
General expense	6.4	
Profit or contingency	3.4	
Sub-total		<u>33.0</u>
Balance for loss and loss adjustment		<u>67.0%</u>

Of the 67.0% for loss and loss adjustment expense 6.1% of premium is expended for unallocated claims expense, i.e., maintenance of the claim department, claim files, etc. In addition, as developed in this study, it is estimated that allocated claims expense, i.e. claims expense specifically allocated to individual claims, absorbs 8.2% of the stock and mutual insurance company premium in New York State, so that total claims adjustment expense amounts to 14.3% of premium; on the 1964 premium volume, this amounts to \$83.7 millions.

Measured against loss payments, allocated claims expense is equal to approximately 16% on the average. This amount has been assumed to correspond approximately to the cost of the current system expended on plaintiffs' attorneys.

Although arguments might be made for reducing allocated claim expense because litigation would be minimized or increasing allocated claim expense because there might be a reduction of controls in first party litigations, for cost analysis purposes it has been here assumed that the proposed system would neither increase nor decrease current claims expense. It has also been assumed that the maximum average allocated claims expense from various sources will prevail. On the average, it is assumed that insurers' allocated claim expense cost of 16% of recovery under the liability system will correspond approximately to the cost of the current system's expenditures on claimants' attorneys. While this may appear low at first, it is not unreasonable to the extent that (a) competition between insurers and claimants for legal services is a factor affecting fees and prices, and (b) the figure represents an average of success<sup>3</sup> and failure in plaintiff representation under contingency fee arrangements.

It is to be noted that the per case loss adjustment expense of both insurers and claimants is reflected at full value in the estimate of cost under the basic protection plan; moreover, the aggregate cost of loss adjustment has been increased 25% to reflect the larger number of claims which will be settled under the proposal.

### *Statistics Background*

In New York State all insurers report their automobile bodily injury liability insurance statistics to either the Mutual Insurance Rating Bureau,

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<sup>3</sup> The State of New York Judicial Conference, Seventh Annual Report, 1962, indicates retainers and contingent fees of one-third or more filed in closing statements, pp. 144 and ff. See also, Columbia University, Project For Effective Justice, Accidents, Money, and the Law: *A Study of the Economics of Personal Injury Litigation*, by Marc A. Franklin, Robert H. Chanin, and Irving Mark, pp. 20 and ff.

the National Association of Independent Insurers, the National Bureau of Casualty Underwriters, or the Statutory Automobile Rating Bureau. The best available automobile personal injury cost data are contained in the records kept by insurers. For purposes of this study it is fortunate that the statistical support needed to comply with insurance rate regulation has resulted in disclosure of much detailed insurance information regarding private passenger automobile experience separate from vehicles used for commercial and other purposes. In addition to this, frequency of claims in relation to number of vehicles insured, average claim costs, and pure premiums or loss costs per car can be computed from the data which are almost always publicly available in reasonable detail.

It must be understood that such insurance information, used with care, is far superior and by no means to be equated with a limited sample survey such as may be obtained by public opinion surveys. This is clearly brought out by a review of insurance claims reported as a result of accidents occurring in 1960. For that year insurers reported 257,245<sup>4</sup> claims (a small number of these claims refer to policy year 1960 rather than accident year 1960). Simultaneously, persons killed or injured in automobile accidents reported to the State of New York Motor Vehicle Department in 1960 numbered 275,795,<sup>5</sup> or 7% more than the number of claims. It is apparent from the closeness of the two figures that claims reported to insurers cover the vast majority of situations involving injuries or fatalities.

Much valuable information is available from workmen's compensation insurance data reported to the New York Compensation Insurance Rating Board, a statistical and ratemaking organization which acts on behalf of insurers. The records of the State of New York Workmen's Compensation Board also indicate the extent of workmen's compensation injuries where the accident causing agency is a motor vehicle.<sup>6</sup>

Although the primary emphasis is on data disclosed through insurance records rather than from other sources, much non-insurance information has also been included and given proper weight in measuring cost factors. The non-insurance information considered in this regard was taken from five main sources. These are the records of the State of New

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<sup>4</sup> Summation of reports of all statistical agents for automobile liability insurance shown in Table D-1.

<sup>5</sup> Published Statistical Report of Motor Vehicle Accidents, State of New York, Department of Motor Vehicles, shown in Table D-1.

<sup>6</sup> Reported in Compensated Cases Closed published by the State of New York Workmen's Compensation Board in various Research & Statistics bulletins. For the years 1961-1963, 25,876 such cases were closed.

York Motor Vehicle Department, the State of New York Workmen's Compensation Board, the United States Department of Health, Education and Welfare Public Health Service, the National Safety Council, and the National Industrial Conference Board.

The State of New York Motor Vehicle Department provides extremely valuable detailed information regarding injuries and fatalities according to description of the accident situation, age, sex, and other characteristics. In measuring economic cost for this study, it has sometimes been necessary to translate summary information published by sex, age, and driver characteristics to census format so that the economic effects according to each of these pertinent characteristics can be combined with labor force characteristics in estimating economic loss.

*U. S. Department of Health, Education and Welfare  
National Health Survey*

There is a general belief that motor vehicle accidents tend to be more severe than other accidents. This is borne out by the U. S. National Health Survey in its publication *Persons Injured in Motor Vehicle Accidents and Associated Disability*, U. S., July 1959-June 1961, Series B, No. 42. At page 3, the survey points out that "Moving motor vehicle accidents accounted for only 6.4 per cent of the persons injured in all accidents. However, the number of disability days resulting from moving motor vehicle accidents represented 18.8 per cent of all restricted-activity days, 22.7 per cent of all bed-disability days, and 20.1 per cent of all work-loss days due to accidental injuries. This would indicate that injuries in moving motor vehicle accidents, in comparison with other types of accidents, occur less frequently, but tend to be more severe." Workmen's compensation data also lead to similar conclusions; accordingly, data selected have been limited to motor vehicles, although other data may also be shown.

*New York State  
Cost Elements of Automobile Accidents*

Sources and descriptions of information bearing on personal injuries resulting from automobile accidents are given later in this report.

The largest single body of insurance information available is that pertaining to private passenger type automobiles classified according to statistical plans and regularly reported to insurance supervisory authorities. The voluminous detail of this information, of which the latest covers accidents occurring in 1963, comprises more than five-sixths of all automobile lia-

bility insurance experience. The records reported by the Mutual Insurance Rating Bureau and the National Bureau of Casualty Underwriters, whose members and subscribers write approximately 70% to 75% of the automobile bodily injury liability insurance business in New York State, were used to determine the comparative cost estimates set forth in Table 1. The use of very conservative values throughout Table 1 affords high cost estimates of the basic protection system. Lines 1 and 2a, separately for indemnity and medical payments costs, are derived directly from data reported by the statistical agents and incorporated in the insurers' ratemaking programs. Line 2b excludes 13.5%<sup>7</sup> of claim cost on account of allocated claim expense. For comparative purposes it should be noted that legal fees under the workmen's compensation system in New York State are considerably less than this percentage. For cases<sup>8</sup> closed from 1961-1963, legal fees per case (where legal fees were charged) averaged 9% of indemnity cost; however legal fees were involved in less than one-sixth of the cases reported and the dollar amounts for legal fees were less than 1.5% of indemnity costs. Line 3 gives the annual pure premium or loss cost per insured car. Line 4 shows the loss cost charge for uninsured motorists coverage.<sup>9</sup> Line 5 sets forth the pure premium (including and excluding allocated claim expense) of the present automobile liability insurance system. Line 6 gives effect to the additional claims which will be payable if liability considerations are removed; a factor of 1.25<sup>10</sup> is applied. In connection with line 7, it is assumed that attorneys' fees on behalf of claimants under the new program will be equal to insurers' current allocated claim expense costs per case and that these will not be reduced under the new program. Line 7a sets forth the 50% of claimants' attorneys' fees payable by the claimant; line 7b sets forth as a single amount the insurers' allocated claim expense plus 50% of the claimants' attorneys' fees which is payable by insurers. Line 8 (excluding allocated claim expense) incorporates a deductible feature of \$100 or 10%, whichever is greater, by application of a factor of .853.<sup>11</sup> Line 8a shows the indicated pure premium (including allocated claim expense of 100% on behalf of the insurer and 50% on behalf of the claimant) before offsets for other insurance, sick

<sup>7</sup> See Table D-2.

<sup>8</sup> Where the accident causing agency was a passenger automobile.

<sup>9</sup> 30% of the premium covers expenses.

<sup>10</sup> From Table D-1.

<sup>11</sup> From Table D-3. See Keeton, R. F. and O'Connell, J., *Basic Protection for the Traffic Victim—A Blueprint for Reforming Automobile Insurance*, Chapter 7, pp. 299-339, *The Proposed Motor Vehicle Basic Protection Insurance Act*, Article 2, Section 2.3 (a). It is to be noted this value could be slightly higher because only work loss is subject to the deductible for larger cases.

**TABLE 1**  
**NEW YORK STATE**  
**ESTIMATED COST ELEMENTS OF AUTOMOBILE ACCIDENTS**  
**BASED ON**  
**AUTOMOBILE BODILY INJURY LIABILITY INSURANCE DATA**

	Liability Basis		
	Indemnity	Medical Payments	Combined
1. Accident year 1963 claim frequency....	5.26%	3.57%	
2. Average claim cost:			
a) including allocated claim expense	\$970	\$182	
b) excluding allocated claim expense			
2a - .865.....	\$839		
3. Pure premium (\$10,000/20,000 indemnity) 1 x 2:			
a) including allocated claim expense	\$ 51.02	\$ 6.50	\$57.52
b) excluding allocated claim expense	\$ 44.13		
4. Uninsured motorist coverage loss cost .70 x \$3.00.....	\$ 2.10		\$ 2.10
5. Estimated present loss cost including uninsured motorist coverage 3 x 4:			
a) including allocated claim expense	\$ 53.12	\$ 6.50	\$59.62
b) excluding allocated claim expense	\$ 46.23		
6. Effect of eliminating liability 5 x 1.25 (for indemnity):			Non- Liability Basis
a) including allocated claim expense			\$66.40
b) excluding allocated claim expense			\$57.79
7. Attorneys' fees and allocated claim expense:			
a) claimants: 50% (6a - 6b).....			\$ 4.31
b) insurers: 150% (6a - 6b).....			\$12.92
8. Indicated loss and allocated claim cost of basic protection program (deductible basis):			
a) before off-sets 6b x .853 ÷ 7b.....			\$62.21
b) discounted 15% for payable economic loss due to the income tax exclu- sion .883 ÷ 6b x .853 ÷ 7b.....			\$56.45
c) 8b after off-sets for other insurance, sick leave, etc. 8b - 6% x 6b...			\$52.98
	\$839 - \$182		
* 15% not applied to medical; 1.0 - .15 x	\$839		.883



leave, etc. Line 8b removes the 15% of economic loss which is excluded from the new program due to the income tax exclusion.<sup>12</sup> Line 8c includes the offsets<sup>13</sup> for other insurance, sick leave, etc., the principal one being that for the New York Disability Benefits Law under which the average claim cost has been \$261<sup>14</sup> per case. It is most probable that other insurance of substantial proportions exists; however, as there appears to be no foolproof way of disclosing such other insurance, it has not been included. The last figure of the exhibit shows the indicated cost of the new program including uninsured motorist coverage at \$10,000/\$20,000 limits.<sup>15</sup> The figure of \$52.98 is approximately 11% less than present day loss costs for statutory limits, including medical payments and uninsured motorist coverage. Such a difference can be used to finance coverage with limits of \$10,000 per claim and \$100,000 per accident.<sup>16</sup>

The figures of Table 1 have been carried forward in Table 2 which affords a comparative estimate of costs of the present automobile liability system with those of the basic protection system. The table shows that, on the basis of high cost estimates (including pain and suffering), the program on a \$10,000/\$20,000 basis would entail approximately 89% of present costs. A somewhat lower estimate results from the application of workmen's compensation average claim costs<sup>17</sup> (excluding pain and suffering) and this is equal to 76% of present costs. To each of these figures should be added the element of multiple claims in a single accident represented by the relative cost of \$10,000/\$20,000 limits and \$10,000/\$100,000 limits for which the current charge is approximately 9% on the bodily injury liability portion of premium only. This element produces an increase factor of 9 per cent on the deductible basis of the basic protection plan resulting in a high cost estimate (including pain and suffering) of 98% of current automobile bodily injury liability costs. The estimate based on workmen's compensation figures (excluding pain and suffering) reduces this amount to approximately 85%. Continuation of the present

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<sup>12</sup> *Ibid.* Article 1, Section 1.10 (d).

<sup>13</sup> Based on 34% of persons injured in motor vehicle accidents being employed and off the job in 55% of the cases and reimbursed at 31% of incurred cost (the average New York Disability Benefits Law claim cost as ratio to automobile liability average claim cost).

<sup>14</sup> For the year 1963 as published by the New York Insurance Department.

<sup>15</sup> This is the "high" estimate referred to on p. 1 *supra*. As indicated there, this is without an adjustment to take account of the fact that payments under the present system are somewhat higher because of damages for pain and suffering. When such an adjustment is made, the estimated cost of basic protection coverage is reduced by about 13 percentage points as indicated in Table 2.

<sup>16</sup> *Op. cit.* Article 2, Section 2.3 (e).

<sup>17</sup> See Table C-3.

**TABLE 2**  
**NEW YORK STATE**  
**DISTRIBUTION OF AUTOMOBILE BODILY INJURY**  
**PURE PREMIUMS AND RELATIVE COSTS OF**  
**AUTO LIABILITY VS. BASIC PROTECTION**

	Present Liability	Basic Protection	
		Auto Data	Auto and W.C. Data
Indemnity (including uninsured motorist)...	\$46.23	\$40.06	\$32.32
Medical.....	6.50		
Allocated claim.....	6.89	12.92	12.92
TOTAL.....	\$59.62	\$52.98	\$45.24
Ratio to total present .....	100%	89%	76%
Increment to purchase \$10,000 \$100,000 limits.....	9%	9% <sup>1</sup>	9% <sup>1</sup>
Relative cost of \$10,000 \$100,000 limits ..	109%	98%	85%

<sup>1</sup>25% additional claims is offset by the 10% deductible and the 15% exclusion of economic loss due to the income tax exclusion.

- Notes:**
1. Figures for present liability and basic protection (auto data) were obtained from Table 1. Indemnity and medical figures for basic protection (auto and workmen's compensation data) were obtained by applying the ratio of workmen's compensation average cost per case limited to \$10,000 (wages and medical at \$677) to automobile bodily injury liability average claim cost excluding allocated claim expense (\$839).
  2. Basic protection costs from auto data include the cost of pain and suffering in the same degree as is contained in the present liability system for the specific limits of coverage.
  3. The inclusion of extraterritorial coverage on a present liability basis requires averaging of costs of basic protection with the 100% level of liability costs in proportion to extraterritorial losses as a per cent of all losses; for extraterritorial losses amounting to 5% of the total, basic protection costs including extraterritorial coverage on a present liability basis affect the table results by less than 1%.

liability basis with respect to extra-territorial insurance coverage should cause virtually no change in the foregoing percentages. It should be noted that the workmen's compensation insurance classification data used produce approximately the same results as would the use of Workmen's Compensation Board data.<sup>18</sup>

That both estimates of cost in Table 2 are essentially conservative is made readily apparent in considering elements such as the 1.25 factor which was used to estimate claim frequencies under the new program.

A sample study conducted by the Motor Vehicle Department indicated that approximately 13% more persons suffer injury in automobile accident involvement than are reported to the Department; these may involve injured persons where the incident is reported only to the insurer or to local law enforcement authorities. A recent published study<sup>19</sup> in Canada used a 15% figure for non-reporting in Ontario. The more conservative (costly) figure of 15% has been utilized in Table D-1 and the result rounded upward; on this basis there are 25% more persons killed and injured than are reported in automobile bodily injury liability insurance statistics. Had the unrounded 1.13 figures of the Motor Vehicle Department sample been used, the resulting frequency figure would have been 3% less than that actually used throughout. Further, it would not have been unreasonable to assume that the *less costly* accidents would not be reported to the Motor Vehicle Department; nevertheless, these accidents have been included at the average amounts. The average indemnity amounts of the selected workmen's compensation insurance classification of Table C-3 tend to be slightly higher than the indemnity costs of workmen's compensation accidents caused by automobiles, shown in Table C-4. Additionally, in estimating allocated claim expense of the new program, the highest cost assumption, namely 13.5%, was used and no economies on the part of the claimant's or insurer's attorneys was reflected. Rather, it is believed that the use of relatively stringent requirements for purposes of this analysis will require the basic protection program to clearly demonstrate its economic feasibility. It is expected that the crucible of experience ultimately will determine the extent to which non-recognition of the foregoing factors proves to have been overly conservative.

More detailed descriptions of the data used throughout are given in the pages which follow.

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<sup>18</sup> See Table C-4.

<sup>19</sup> Wittick, Herbert E., "Estimating the Cost of Accident Insurance as a part of Automobile Liability Insurance," *PCAS; Vol. LI*, pp. 105-121.

*State of New York*  
*Motor Vehicle Department Statistics*

Statistics<sup>20</sup> published by the State of New York Motor Vehicle Department cover all fatal motor vehicle accidents and personal injury motor vehicle accidents reported during the year 1964. Persons injured are separated into three categories, namely, (a) those suffering fractures, lacerations or other serious injury, (b) other visible injury and (c) no visible injury but complaint of pain. Other pertinent characteristics such as age, sex, driver, etc., are also shown. For the current study individual characteristics pertinent to economic loss were identified and combined with specific economic and other cost factors.

Table A-1 shows persons injured in automobile accidents in New York State in 1964 according to age groups for pedestrians, persons in other motor vehicles, etc.

Table A-2 shows similar information for persons killed.

Table A-3 exhibits drivers involved in personal injury accidents reported in 1964 by sex and age of driver. This information is later utilized to allocate the total number of drivers injured according to age and sex.

Table A-4 shows drivers involved in accidents reported in 1964 by sex. The percentage of male and female was applied to the total number of drivers injured in motor vehicle accidents reported in 1964 to form the basis for Table A-5. The total figures for all ages were then distributed to age group in accordance with the percentages of involved drivers shown in Table A-3.

The class intervals used in Table A-5 for age groups conform approximately to the class intervals published by the United States Census Bureau for persons in the labor force.

Table A-6 divides those persons injured in motor vehicle accidents reported in 1964 into drivers and all others by age group.

Table A-7 shows all persons injured by sex and subdivides them into the driver and all other category according to stated ages and as a per cent of the total for non-drivers injured by stated age.

*United States Census*  
*New York Population 1960*

Census reports<sup>21</sup> show percentages of persons in the labor force in

<sup>20</sup> Statistical Report of Motor Vehicle Accidents, State of New York, Department of Motor Vehicles.

<sup>21</sup> United States Census of New York Population 1960—Table 54, Labor Force Status By Age and Sex.

New York State according to age and sex. These percentages have been applied to persons injured according to age, sex and driver characteristics.

Table B-1 shows the percentage of persons injured who are drivers according to age and sex and the average per cent of injured male drivers and injured female drivers in the labor force.

Table B-2 shows the percentage of non-drivers according to age and the average percentages of injured non-drivers in the labor force, for male or female.

Table B-3 is a recapitulation of the persons injured shown in Table A-7, with 39% of the non-drivers age 15 or over distributed to the male category. The average percentages in the labor force of Tables B-1 for drivers and B-2 for non-drivers are combined to give the percentage in the labor force for injured males and females age 15 and over.

Table B-4 is in two parts. Persons under age 15 are assumed not to be in the labor force; males and females 15 years old and over are distributed according to whether or not they are in the labor force. It is here assumed that 95% of females 15 years old and over who are not in the labor force are nevertheless engaged in housekeeping. The latter part of this table is a recapitulation which shows that, of the persons injured in automobile accidents, approximately 61% are in the labor force at the time, 17% are housekeeping dependents and the remaining 22% are other dependents.

#### *Workmen's Compensation Experience New York Policy Year 1961*

The New York Compensation Insurance Rating Board publishes data<sup>22</sup> on all workmen's compensation insurance classifications of risk. Among these are taxicab companies—chauffeurs and employees away from garage, route salesmen and route supervisors, which classifications produce a concentration of compensable injuries resulting from motor vehicle accidents. Accordingly, the experience of these classifications has been used in arriving at cost estimates of a basic protection plan. If the experience of all workmen's compensation classifications were appropriate, then resulting average cost estimates would have been somewhat lower.

Table C-1, Part I, shows policy year 1961 workmen's compensation insurance experience for taxicab companies—chauffeurs and employees

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<sup>22</sup> New York Workmen's Compensation Classification Experience compiled from reports under the Unit Statistical Plan by the New York Compensation Insurance Rating Board.

away from garage, route salesmen and route supervisors, and also all classifications combined. Numbers of claims, indemnity and medical costs are shown separately for cases involving death, permanent total, major permanent, minor permanent, temporary and non-compensable medical injuries. The figures are adjusted to reflect benefit changes effectuated by the New York State Legislature through June 30, 1965 and ultimate developments of experience in accordance with regular procedures utilized by the New York Compensation Insurance Rating Board. Medical costs were also adjusted to reflect 1965 levels of cost in accordance with medical and hospital agreements made between insurers and hospitals.

Table C-1, Part II, adjusts the figures of Table C-1, Part I, to eliminate the workmen's compensation law limitations on indemnity benefit amounts and also limitations on number of compensable cases. The computations for removing the waiting period and two-thirds of wages limitations follow the New York Compensation Insurance Rating Board's methods of evaluation which were taken from the procedures adopted by the National Association of Insurance Commissioners.<sup>23</sup>

Table C-2 shows the average work loss and average medical cost of Table C-1, Part II, according to category of death, permanent total, major permanent partial, minor permanent partial, temporary and non-compensable medical injury.

Table C-3 combines the number of persons killed or injured reported to the State of New York Motor Vehicle Department in 1964 (number injured increased 15% for non-reporting) with the average costs per workmen's compensation case taken from the selected automobile classifications of Table C-2. Individual costs were rounded to the nearest ten dollars. In addition to showing the unlimited total and medical-only cost per case, death and major permanent cases were limited to a \$10,000 average cost (in actual operation the figure will be less than \$10,000, on the average) and other cases were included at undiscounted amounts shown in Table C-2 under the heading, Limited to \$10,000, Total. Also shown under the heading, Limited to \$10,000, are Wages and Medical figures which include \$10,000 for death and major permanent cases, full medical costs on all cases, full indemnity costs for 61% of injured persons in the labor force and 50% of full indemnity costs for 17% of injured persons engaged in housekeeping as set forth in Table B-4. It is interesting to note that these workmen's compensation figures adjusted to 1965 conditions produce

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<sup>23</sup> Proceedings of the National Association of Insurance Commissioners, 84th Annual Convention, 1953, Vol. II, pp. 711-746.

medical costs of \$182 per case and limited economic loss of \$677 per case compared with automobile liability accident year 1963 average limited medical payments costs of \$182 and indemnity of \$839 per case<sup>24</sup> (reported as of 1964 and developed to an ultimate cost basis). The data reinforce each other and suggest the conclusion that pain and suffering is a meaningful, but not over-riding, cost element of the first \$10,000 of loss per case.

*State of New York  
Workmen's Compensation Board  
Compensated Cases Closed 1961-1963*

The New York Workmen's Compensation Board has available records<sup>25</sup> of the accident agency, which is defined as the specific object, substance, or part of the working environment most intimately associated with the injury occurring in workmen's compensation cases. Tabulations of detailed data pertinent to this study cover 25,876 cases closed from 1961-1963 where the accident agency was a motor vehicle, 8,733 of which were passenger cars. Of these 6,916 cases involved passenger cars in motion.

Average indemnity cost information relating to the 25,876 cases closed is contained in Table C-4. That table shows the average indemnity costs of workmen's compensation cases closed in 1961-1963 for injuries caused by automobiles, according to category of injury, both on a present workmen's compensation indemnity basis and on a full indemnity basis. These data which tend to show somewhat lower average costs than the selected automobile classifications of Table C-2 are based on more than 25 times as many indemnity cases; however, no information regarding medical costs and the number of non-compensatory medical cases has been reported. In general, the amounts shown in Table C-4 tend to support the amounts in Table C-2 although the former are somewhat less.

Table C-5 indicates accidents resulting from autos not in motion tend to be less costly than those resulting from autos in motion. The difference in average cost per case can here be seen for the occupations producing the greatest number of automobile workmen's compensation cases.

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<sup>24</sup> See Table I.

<sup>25</sup> Detailed information is recorded on punched cards showing agency cause, industry, occupation, extent of disability, compensation award, legal fee and other relevant data. Some of this detail is published in the various Research & Statistics Bulletins.

### *Automobile Bodily Injury Liability Insurance*

Insurers report their experience in a variety of ways. Annual aggregate results are shown in the insurance expense exhibit<sup>26</sup> which is part of the annual statement filed by every insurer each year. Reports<sup>27</sup> to statistical agents are also made in great detail according to classification, amount of excess loss, etc. For the year 1960, comparisons of premiums from both sources are shown in Table D-1. In addition, the number of bodily injury liability claims reported to statistical agents is shown and compared with the records of the State of New York Motor Vehicle Department of the number of persons reported killed or injured in 1960.

It is pertinent here to reflect that the insurer counts only those claims where it has put up an amount in reserve on account of an accident or where it has made a payment on the claim. Initially, the count of claims will reflect the insurer's practices and evaluation of an incident described by its insured and not by the accident victim; thus there may be confusion between property damage and personal injury and uncertainty as to whether personal injury occurred even though an insurer records a claim. This confusion of facts, together with unsuccessful liability claims under the present system is reflected in the subsequent reports of statistics filed by insurers. For example, the two leading statistical organizations reported 175,188 private passenger automobile liability insurance claims for accident year 1960 in their first reports and this number dropped by 4% to 167,479 at the third report of the same incidents.

Summaries from the usual classification records reported to the statistical agents are contained in Table D-1. Classified experience in detail includes allocated claim expense, that is, the insurer's loss adjustment expense which is allocable to the specific claim. The information of Table D-2 is shown on the basis of inclusion and exclusion of such loss adjustment expense. It is therefore possible to determine allocated claim expense cost by comparing the year 1962 on both bases. For this purpose, the National and Mutual Bureaus' private passenger automobile liability insurance claims, which comprise about five-sixths of the total, were reviewed. The results shown in Table D-2 indicate that allocated claim expense in New York State amounts to approximately 13.5% of the claim

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<sup>26</sup> Summaries are published by the State of New York Insurance Department in its annual booklet, *Loss and Expense Ratios*.

<sup>27</sup> Summaries are reported to insurance regulatory authorities. Consolidations are also reported to the statistical agent's member and subscriber insurers.



cost including such expense, a figure which is substantially higher (and more conservative) than the countrywide figures<sup>28</sup> would indicate.

The Mutual Insurance Rating Bureau and the National Bureau of Casualty Underwriters function as both statistical and rate-making organizations. In that capacity approximately 70% to 75% of liability insurance claims are reported to them. For purposes of computing the amount of losses eliminated by various sizes of deductible insurance cost, these organizations call for and collect data by size of claim.<sup>29</sup> Such information on New York State experience for the year 1962 is shown in summary form in Table D-3. Under a program to pay 90% of the amount of claims subject to a deductible of the first hundred dollars of loss, the cost would be 85.3% of the cost without a deductible feature. A minor variation due to the fact that only work loss is subject to the deductible for larger cases need not be included in the foregoing factor.

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<sup>28</sup> Member companies reported to the National Bureau of Casualty Underwriters countrywide figures of approximately 8.5% comparable to the 13.5% figure for stock and mutual insurers on New York business.

<sup>29</sup> Call for Automobile Liability Size of Claim Data.

**TABLE A-1**  
**NEW YORK STATE**  
**PERSONS INJURED IN AUTOMOBILE ACCIDENTS - 1964**

Age Group	Totals	Pedestrian	Other Motor Vehicle	Motor Vehicle with Pedestrian	Bicycle	Fixed Object	Other
0 - 4	9,388	2,280	6,365	26	64	341	312
5 - 14	26,520	9,325	11,767	108	3,806	842	672
15 - 24	67,175	2,645	48,405	234	882	10,212	4,797
25 - 44	96,387	3,247	81,895	406	116	7,319	3,404
45 - 64	56,228	3,240	47,992	215	51	3,111	1,619
65 & over	11,656	1,975	8,548	62	15	673	383
Not stated	27,613	2,458	22,558	265	516	894	922
TOTAL.....	294,967	25,170	227,530	1,316	5,450	23,392	12,109

**AS PERCENTAGE TO TOTALS**

Age Group	Totals	Pedestrian	Other Motor Vehicle	Motor Vehicle with Pedestrian	Bicycle	Fixed Object	Other
0 - 4	3.2%	9.1%	2.8%	2.0%	1.2%	1.4%	2.6%
5 - 14	9.0	37.0	5.2	8.2	69.8	3.6	5.5
15 - 24	22.8	10.5	21.3	17.8	16.2	43.7	39.6
25 - 44	32.7	12.9	36.0	30.9	2.1	31.3	28.1
45 - 64	19.0	12.9	21.1	16.3	.9	13.3	13.4
65 & over	3.9	7.8	3.7	4.7	.3	2.9	3.2
Not stated	9.4	9.8	9.9	20.1	9.5	3.8	7.6
TOTAL.....	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: New York State Motor Vehicle Department

**TABLE A-2**  
**NEW YORK STATE**  
**PERSONS KILLED IN AUTOMOBILE ACCIDENTS - 1964**

Age Group	Totals	Pedestrian	Other Motor Vehicle	Motor Vehicle with Pedestrian	Bicycle	Fixed Object	Other
0 - 4	101	71	19	2	—	3	6
5 - 14	238	135	27	6	48	12	10
15 - 24	701	64	225	4	7	305	96
25 - 44	627	93	223	13	2	225	71
45 - 64	586	197	213	10	3	120	43
65 & over	485	289	126	10	2	42	16
Not stated	65	29	16	4	3	10	3
TOTAL.....	2,803	878	849	49	65	717	245

**AS PERCENTAGE TO TOTALS**

Age Group	Totals	Pedestrian	Other Motor Vehicle	Motor Vehicle with Pedestrian	Bicycle	Fixed Object	Other
0 - 4	3.6%	8.1%	2.2%	4.1%	— %	.4%	2.4%
5 - 14	8.5	15.4	3.2	12.2	73.8	1.7	4.1
15 - 24	25.0	7.3	26.5	8.2	10.8	42.5	39.2
25 - 44	22.4	10.6	26.3	26.5	3.1	31.4	29.0
45 - 64	20.9	22.4	25.1	20.4	4.6	16.7	17.6
65 & over	17.3	32.9	14.8	20.4	3.1	5.9	6.5
Not stated	2.3	3.3	1.9	8.2	4.6	1.4	1.2
TOTAL.....	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: New York State Motor Vehicle Department

**TABLE A-3**  
**NEW YORK STATE**  
**STATISTICAL REPORT OF MOTOR VEHICLE ACCIDENTS**  
**DRIVERS INVOLVED IN**  
**PERSONAL INJURY ACCIDENTS REPORTED IN 1964**  
**BY SEX AND AGE OF DRIVER**

<u>Age</u>	<u>Personal Injury</u>			
	<u>Male</u>		<u>Female</u>	
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
Under 18 .....	5,621	2.5%	1,585	3.1%
18 - 24 .....	46,996	20.5	11,077	21.5
25 - 29 .....	28,482	12.5	5,382	10.5
30 - 39 .....	52,708	23.0	12,332	24.0
40 - 49 .....	44,614	19.5	11,619	22.6
50 - 59 .....	30,845	13.5	6,405	12.5
60 - 64 .....	9,626	4.2	1,552	3.0
65 & Over.....	<u>9,747</u>	<u>4.3</u>	<u>1,466</u>	<u>2.8</u>
TOTAL.....	228,639	100.0%	51,418	100.0%
NOT STATED .....	<u>49,468</u>		<u>7,074</u>	
GRAND TOTAL.....	278,107		58,492	

Source: State of New York, Department of Motor Vehicles

## BASIC PLAN COSTS

**TABLE A-4**  
**NEW YORK STATE**  
**STATISTICAL REPORT OF MOTOR VEHICLE ACCIDENTS**  
**DRIVERS INVOLVED IN ACCIDENTS REPORTED IN 1964**  
**BY SEX**

		Number	Per Cent
Personal injury	Male.....	278,107	83%
	Female.....	58,492	17
	TOTAL.....	336,599	100%
Fatal	Male.....	2,857	88%
	Female.....	394	12
	TOTAL.....	3,251	100%

Source: State of New York, Department of Motor Vehicles

**TABLE A-5**  
**NEW YORK STATE**  
**DRIVERS INJURED IN MOTOR VEHICLE ACCIDENTS**  
**REPORTED IN 1964**  
**BY SEX AND AGE OF DRIVER**

Age	Male		Female	
	Per Cent	Number	Per Cent	Number
All Ages	100.0	107,691	100.0	22,109
Under 15.....	-	-	-	-
15 - 24.....	23.0	24,769	24.6	5,439
25 - 44.....	45.3	48,784	45.8	10,126
45 - 64.....	27.4	29,507	26.8	5,925
65 & over.....	4.3	4,631	2.8	619

Note: Percentages were obtained from exhibit of drivers involved in motor vehicle accidents reported in 1964. 142,637 reported drivers injured were reduced 9% in proportion to number of persons injured with ages not stated. Male drivers were taken at 75.5% of all drivers injured and female drivers at 15.5%.

**TABLE A-6**  
**NEW YORK STATE**  
**ALL PERSONS INJURED IN MOTOR VEHICLE ACCIDENTS**  
**REPORTED IN 1964**  
**DRIVERS AND ALL OTHERS, BY AGE**

Age	All	Drivers	All Others		
			Number	Per Cent	Per Cent of Age 15 & Over
Under 15 .....	35,908	—	35,908	26.1	XX
15 — 24 .....	67,175	30,208	36,967	26.9	36.4
25 — 44 .....	96,387	58,910	37,477	27.2	36.9
45 — 64 .....	56,228	35,432	20,796	15.1	20.4
65 & over .....	11,656	5,250	6,406	4.7	6.3
All stated ages....	267,354	129,800	137,554	100.0	XX
15 & over .....			101,646		100.0

Note: All persons injured are based on 1964 reports to State of New York Motor Vehicle Department. Drivers injured by age are based on 1964 reports of drivers involved in motor vehicle accidents.

**TABLE A-7**  
**NEW YORK STATE**  
**PERSONS INJURED IN MOTOR VEHICLE ACCIDENTS**  
**REPORTED IN 1964**  
**TOTAL, DRIVERS AND ALL OTHERS, BY SEX**

Category	Male	Female	Total
All persons injured .....	178,297	116,670	294,967
Age not stated .....	16,691	10,922	27,613
All persons injured — stated ages.....	161,606	105,748	267,354
Drivers injured — stated ages .....	107,691	22,109	129,800
All other persons injured — stated ages	53,915	83,639	137,554
Percentage of total.....	39%	61%	100%

Note: 27,613 persons injured with age not stated have been allocated to sex in proportion to all males and females injured in motor vehicle accidents. Drivers injured are based on reports of drivers involved in motor vehicle personal injury accidents reported in 1964.

## BASIC PLAN COSTS

TABLE B-1

NEW YORK STATE  
PER CENT OF DRIVERS INJURED IN MOTOR VEHICLE ACCIDENTS  
REPORTED IN 1964 AND AVERAGE PER CENT IN LABOR FORCE  
BY SEX AND AGE

Age	Male Drivers		Female Drivers	
	In Accidents	In Labor Force	In Accidents	In Labor Force
Under 18 .....	2.5%	20.6%	3.1%	13.2%
18 - 24 .....	20.5	77.7	21.5	53.5
25 - 44 .....	45.3	95.1	45.8	40.0
45 - 64 .....	27.4	90.3	26.8	44.5
65 & over .....	4.3	34.1	2.8	11.9
TOTAL .....	100.0%	85.7%	100.0%	42.5%

- Note: 1. Per cents in accidents are based on 1964 reports to State of New York Motor Vehicle Department of drivers involved in motor vehicle accidents.
2. Per cents in labor force are based on United States Census of New York Population 1960 - Table 54, Labor Force Status By Age and Sex.

TABLE B-2

NEW YORK STATE  
PER CENT OF NON-DRIVERS INJURED IN MOTOR VEHICLE ACCIDENTS  
REPORTED IN 1964 AND AVERAGE PER CENT IN LABOR FORCE  
BY SEX AND AGE

Age	Non - Drivers	In Labor Force	
	In Accidents	Male	Female
15 - 24 .....	36.4%	77.7%	53.5%
25 - 44 .....	36.9	95.1	40.0
45 - 64 .....	20.4	90.3	44.5
65 & over .....	6.3	34.1	11.9
	100.0%	83.9%	44.1%

- Note: 1. Per cents of non-drivers in accidents are based on 1964 reports to State of New York Motor Vehicle Department of personal injury accidents.
2. Per cents in labor force are based on United States Census of New York Population 1960 - Table 54, Labor Force Status By Age and Sex.

TABLE B-3  
 RECAPITULATION  
 NEW YORK STATE  
 NUMBER OF PERSONS INJURED IN MOTOR VEHICLE ACCIDENTS  
 REPORTED IN 1964  
 AND AVERAGE PER CENT IN LABOR FORCE  
 BY DRIVER STATUS AND SEX FOR PERSONS 15 AND OVER  
 AND ALL PERSONS UNDER 15

Category	Persons Injured				
	Total	Male	In Labor Force	Female	In Labor Force
15 and over:					
All drivers .....	129,800	107,691	85.7%	22,109	42.5%
All others .....	101,646	39,642	83.9	62,004	44.1
SUB-TOTAL .....	231,446	147,333	85.2%	84,113	43.7%
Under 15 .....	35,908				
TOTAL - STATED AGES	267,354				



**TABLE B-4**  
**NEW YORK STATE**  
**NUMBER OF PERSONS INJURED IN MOTOR VEHICLE ACCIDENTS**  
**REPORTED IN 1964**  
**IN LABOR FORCE, OUTSIDE LABOR FORCE AND**  
**PERCENTAGE DISTRIBUTION**

Category	In Labor Force	Not in Labor Force
Under 15 yrs. old .....		35,908
Males - Per cent .....	85.2%	14.8%
Number .....	125,528	21,805
Females - Per cent .....	43.7%	56.3%
Number .....	36,757	
Housekeeping <sup>†</sup> .....		44,988
Not housekeeping .....		2,368

<sup>†</sup>1960 census reports 2,646,304 married women, not in labor force, with husband present, out of 4,102,165 women 14 years old and over, not in labor force. Conservatively, 95% of females 15 years old and over and not in labor force are assumed to be housekeepers.

			RECAPITULATION	
			Number	Per Cent
Totals	In labor force .....		162,285	61
	Not in labor force:			
	Female housekeeping .....		44,988	17
	Other dependents .....		60,081	22
TOTAL STATED AGES .....			267,354	100

Source: State of New York Department of Motor Vehicle data combined with United States Census of New York Population 1960, Labor Force data.

TABLE C-1 Part I  
 NEW YORK STATE  
 POLICY YEAR 1961 WORKMEN'S COMPENSATION EXPERIENCE  
 AT TWO-THIRDS OF WAGES AND \$55 WEEKLY LIMIT - ULTIMATE BASIS  
 SELECTED AUTOMOBILE CLASSIFICATIONS AND ALL CLASSIFICATIONS

Category	Taxicab Cos. - Chauffeurs and Employees away from garage; Route Salesmen & Route Supervisors			All Classifications			BASIC PLAN COSTS
	No. of Claims	Indemnity	Medical	No. of Claims	Indemnity	Medical	
Death .....	10	235,340	6,109	554	13,859,387	341,266	
Permanent total .....				59	1,619,293	1,152,946	
Major permanent .....	7	142,832	26,869	1,860	19,741,823	5,646,721	
Minor permanent .....	164	213,040	72,054	26,752	32,803,068	9,543,202	
Temporary .....	798	409,928	224,435	62,312	34,254,084	18,276,240	
Non-compensable medical ...	<u>1,282</u>		<u>64,127</u>	<u>361,469</u>		<u>12,142,524</u>	
TOTAL .....	2,261	1,001,140	393,594	453,006	102,277,655	47,102,899	

Note: Figures at second report were adjusted to reflect law changes to June 30, 1965 and ultimate development as per New York Compensation Insurance Rating Board regular procedure applicable to classification experience.

**TABLE C-1 Part II**  
**NEW YORK STATE**  
**POLICY YEAR 1961 WORKMEN'S COMPENSATION EXPERIENCE**  
**WORK LOSS AND MEDICAL COSTS**  
**SELECTED AUTOMOBILE CLASSIFICATIONS AND ALL CLASSIFICATIONS**

Category	Taxicab Cos. - Chauffeurs and Employees away from garage; Route Salesmen & Route Supervisors			All Classifications		
	No. of Claims	Indemnity	Medical	No. of Claims	Indemnity	Medical
Death .....	10	462,443	6,109	554	27,233,695	341,266
Permanent total .....				59	3,181,911	1,152,946
Major permanent .....	7	280,665	26,869	1,860	38,792,682	5,646,721
Minor permanent .....	164	418,624	72,054	26,752	64,458,029	9,543,202
Temporary .....	1,234	974,666	246,238	185,211	81,444,223	22,404,698
Non-compensable medical ...	846		42,324	238,570		8,014,066
<b>TOTAL .....</b>	<b>2,261</b>	<b>2,136,398</b>	<b>393,594</b>	<b>453,006</b>	<b>215,110,540</b>	<b>47,102,899</b>

BASIC PLAN COSTS

- Note: 1. The number of temporary cases for all classifications includes those lasting 7 days or less taken at 196% of reported temporary cases equal to 34% of reported non-compensable medical cases. 34% of non-compensable cases and medical amounts were transferred to the temporary category.
2. Ultimate basis indemnity loss figures at two thirds of wages and \$55 weekly limit were adjusted by regular limit factor procedures used by the New York Compensation Insurance Rating Board at  $\frac{1.0}{.7635 \times 2/3} = 1.965$ .  
 In addition, temporary indemnity cost was increased 21.0% for elimination of 7 day waiting period.
3. Medical costs reflect 1965 levels.

TABLE C-2  
NEW YORK STATE  
POLICY YEAR 1961 WORKMEN'S COMPENSATION EXPERIENCE  
AVERAGE WORK LOSS AND MEDICAL COSTS  
SELECTED AUTOMOBILE CLASSIFICATIONS AND  
ALL CLASSIFICATIONS

Category	Taxicab Cos. — Chauffeurs and Employees away from garage; Route Salesmen and Route Supervisors		All Classifications	
	Indemnity	Medical	Indemnity	Medical
Death .....	\$46,244	\$ 611	\$49,158	\$ 616
Permanent total .....			53,931	19,541
Major permanent .....	40,095	3,838	20,856	3,036
Minor permanent .....	2,553	439	2,409	357
Temporary .....	790	200	440	121
Non-compensable medical .....		50		34

Note: Based on figures from Table C-1 Parts I and II.

**TABLE C-3**  
**NEW YORK STATE**  
**NUMBER OF PERSONS KILLED OR INJURED IN MOTOR VEHICLE**  
**ACCIDENTS REPORTED IN 1964**  
**BY TYPE AND ESTIMATED AVERAGE INDEMNITY AND**  
**MEDICAL COST PER CASE**

Type	No. of Cases	Average Cost Per Case			
		Unlimited Total	Limited to \$10,000		
			Total	Wages & Medical	Medical Only
Death.....	2,803	\$46,860	\$10,000	\$10,000	\$610
Serious.....	36,134	7,090	3,690	2,990	780
Non-serious....	114,923	990	990	750	200
Medical.....	188,155	50	50	50	50
<b>TOTAL.....</b>	<b>342,015</b>	<b>\$ 1,493</b>	<b>\$ 832</b>	<b>\$ 677</b>	<b>\$182</b>

- Note:** 1. Figures by type are those reported to State of New York Department of Motor Vehicles, with injury cases increased 15% to include non-reporting.
2. Average costs per case are developed from workmen's compensation insurance coverage for taxicab companies' chauffeurs and employees away from the garage and route salesmen and route supervisors rounded to the nearest \$10. Although definitions of type are not identical for Motor Vehicle and workmen's compensation accidents, they are considered to be similar enough to warrant their use in determining comparative average costs.
3. Serious average cost per case is the average of major and minor as follows:

	Per Cent	Unlimited	Limited to \$10,000		
			Total	Wages & Medical	Medical
Major.....	10	\$43,933	\$10,000	\$10,000	\$3,838
Minor.....	90	2,992	2,992	2,213	439
Average.....		7,086	3,693	2,991	779
Rounded.....		7,090	3,690	2,990	780

4. In calculating wages and medical loss \$10,000 was used for death and major permanent cases. For other cases full medical costs were used, full indemnity loss for 61% in the labor force, 50% of indemnity loss for 17% in housekeeping and no indemnity loss for 22% other dependents.

**TABLE C-4**  
**NEW YORK STATE**  
**AVERAGE INDEMNITY COSTS OF WORKMEN'S COMPENSATION CASES**  
**CAUSED BY AUTOMOBILES**  
**CASES CLOSED 1961-1963, BY CATEGORY OF INJURY**

Category	All Cars	Passenger Cars			Not Passenger Cars
		All	In Motion	Not In Motion	
<b>WORKMEN'S COMPENSATION BASIS - \$60 MAXIMUM PER WEEK</b>					
Death .....	\$24,660	\$24,079	\$23,674	\$31,997	\$25,106
Permanent total ....	56,402	58,745	57,193	80,469	54,995
Major permanent ....	21,718	22,931	24,156	15,910	21,229
Minor permanent ....	1,528	1,526	1,965	1,042	1,529
Temporary .....	404	400	410	336	406
<b>FULL INDEMNITY BASIS</b>					
Death .....	\$44,413	\$43,366	\$42,637	\$57,627	\$45,216
Permanent total ....	101,580	105,800	103,005	144,925	99,046
Major permanent ....	39,114	41,299	43,505	28,654	38,233
Minor permanent ....	2,752	2,748	3,539	1,877	2,754
Temporary .....	573	566	580	476	575

**Note:** For full indemnity basis, all figures on \$60 maximum per week have been adjusted by a factor of 1.801. In addition, temporary costs have been adjusted by a cost factor of 1.210 to reflect the elimination of the waiting period and a frequency factor of .65 for inclusion of additional short duration cases.

TABLE C-5  
NEW YORK STATE  
AVERAGE INDEMNITY COSTS OF WORKMEN'S COMPENSATION CASES  
CAUSED BY PASSENGER AUTOMOBILES  
CASES CLOSED 1961-1963, BY SELECTED OCCUPATIONS  
WORKMEN'S COMPENSATION BASIS, \$60 MAXIMUM PER WEEK

Occupation	Death	Total	Permanent		Temporary
			Major	Minor	
<b>AUTOS IN MOTION</b>					
Professional workers, not nurses	\$23,836	\$50,185	\$25,494	\$2,284	\$690
Managers & officials	26,728	70,802	25,765	2,099	587
Messengers, distributors	2,760	57,422	19,647	1,844	275
Outside salespersons, agents	28,519	-	19,947	2,192	428
Protective service workers	17,051	51,790	36,310	2,191	512
Mechanics, repairmen	31,374	-	26,565	1,863	465
Chauffeurs, drivers	19,378	15,053	19,044	1,719	344
All industries	\$23,674	\$57,193	\$24,156	\$1,965	\$410
<b>AUTOS NOT IN MOTION</b>					
Managers & officials	-	-	\$10,116	\$1,122	\$302
Outside salespersons, agents	-	-	15,985	1,092	326
Protective service workers	-	-	36,239	905	807
Mechanics, repairmen	\$34,030	-	20,714	1,050	313
Chauffeurs, drivers	-	-	14,153	1,244	362
Attendants, garage, etc.	-	-	7,183	791	234
Garage laborers, etc.	-	-	10,649	1,988	236
All industries	\$31,997	\$80,469	\$15,910	\$1,042	\$336

TABLE D-1

**NEW YORK STATE  
1960 AUTOMOBILE BODILY INJURY LIABILITY INSURANCE DATA  
FOR ALL INSURERS COMBINED**

Item	Premiums	No. of Claims
Private passenger non-fleets .....	393,429,734	217,831
All others .....	81,717,734	39,414
<b>TOTAL</b> .....	<b>475,147,468</b>	<b>257,245</b>
Comparative reports elsewhere:		
A. Insurance expense exhibit		
Policy year 1960 .....	479,103,945	
B. State of New York Motor Vehicle Department:		
(1) Number reported killed and injured 1960 .....		275,795
(2) (1) Increase for non-reporting at 15% of number injured		41,056
(3) Total injured and killed .....		316,851
C. Total injured and killed as ratio to insurance claims		
reported .....		1.23
D. Ratio in C rounded upward .....		
		1.25

TABLE D-2

**NEW YORK STATE  
ALLOCATED CLAIM EXPENSE  
FROM COMPARISON OF PRIVATE PASSENGER AUTOMOBILE  
ACCIDENT YEAR 1962 BODILY INJURY LIABILITY CLAIM COSTS  
WITH AND WITHOUT ALLOCATED CLAIMS EXPENSE**

Item	Cos. Reporting to Mutual Insurance Rating Bureau and National Bureau of Casualty Underwriters			
	Losses Incurred			Basic Limits Avg. Claim Cost
	Basic Limits	Excess Limits	No. of Claims	
1. Including allocated claim expense .....	\$160,418,503	\$10,908,661	158,953	\$1,009.
2. Excluding allocated claim expense .....	112,259,226	6,201,152	128,519	873.
3. Allocated claim expense as per cent of losses includ- ing allocated claim expense .....				13.5%

**Note:** Figures including allocated claim expense were derived from accident year 1962 experience of the National and Mutual Insurance Rating Bureaus; figures excluding allocated claim expense were derived from automobile bodily injury liability size of claim experience for calendar or accident year 1962.



TABLE D-3  
NEW YORK STATE  
INDICATED COST OF THE LARGER DEDUCTIBLE  
OF \$100 OR 10% PER CLAIM

Item	Private Passenger		All Cars	
	No. of Claims	Amount	No. of Claims	Amount
A. Less than \$100	25,231	\$ 1,056,089	28,377	\$ 1,186,630
B. \$100 and less than \$1,000	75,039	31,551,812	84,931	35,680,715
C. \$1,000 – \$10,000	28,249	79,651,325	32,173	90,873,040
D. Total.....	128,519	\$112,259,226	145,481	\$127,740,385

Losses Eliminated By \$100 or 10% Deductible Per Claim:

From A (\$100).....	\$ 1,056,089	\$ 1,186,630
From B (\$100).....	7,503,900	8,493,100
From C (10%).....	7,965,133	9,087,304
E. Total losses eliminated .....	\$ 16,525,122	\$ 18,767,034
F. E as % of D.....	14.7%	14.7%
G. Charge with deductible		
100.0% – F.....	85.3%	85.3%

TABLE D-4  
 NEW YORK STATE  
 1962 PRIVATE PASSENGER  
 AUTO BODILY INJURY LIABILITY LOSSES  
 BY SIZE OF CLAIM (LIMITED TO \$10,000 PER CLAIM)

<u>Size of Claim Group</u>	<u>Amount of Losses of Group Size</u>	<u>No. of Claims in Excess of Group Size</u>
Less than \$ 25	67,335	121,752
" " 50	300,469	114,602
" " 100	1,056,089	103,288
" " 250	4,663,115	80,700
" " 500	12,835,585	57,393
" " 1,000	32,607,901	28,249
" " 2,000	52,649,539	13,405
" " 3,000	64,891,758	8,286
" " 4,000	73,860,438	5,649
" " 5,000	80,251,953	4,204
" " 10,000	102,919,226	934
First 10,000	112,259,226	
All sizes	112,259,226	128,519

## APPENDIX A

Modifications Resulting From Conditional  
Adjustments in Factors Applicable to Costs  
of Basic Protection

The main body of the text deals with estimates of costs essentially in the most conservative manner practicable. There are, however, a number of valid considerations which, if recognized, will result in a more realistic appraisal of probable costs. These are listed below and their effects are included in a series of conditional adjustments which result in an adjusted Table 2, Appendix B.

(1) Liability insurance claims are only 97% of liability claims paid, the balance of 3% being paid by political subdivisions and other self-insurers. For workmen's compensation insurance, self-insurers comprise approximately 5% of the total; automobile registrations indicate approximately 1% of the total involve exempt vehicles.

(2) 25% additional claims are estimated to cost, on the average, 80% of that of known liability claims, giving rise to a factor of  $1.200 \div 1.250 = .96$  or a 4% reduction.

(3) Allocated claims expense per case is estimated to cost 10% less than present costs for both claimant and insurer.

(4) The applicable deductible factor is estimated to be 5% higher because the deductible feature does not apply to high cost medical expense and coverage is \$10,000 above the deductible amount.

(5) Disability benefits payments recovered under the program represent only half of the amount of recoveries which will be obtained under the program.

(6) 10% of cases in the Motor Vehicle Department definition of serious would be classified as temporary according to the workmen's compensation definition (i.e. lacerations, etc.)

(7) The auto data basic protection pure premium index is approximately equal to the sum of (a), (b), and (c) as follows:

(a) $(.865 \times 1.25 \times .853 \times .883)$	= .814
(b) $(1.5 \times 1.25 \times .135)$	= .253
(c) $-(.06 \times .865 \times 1.25)$	= <u>-.065</u>
(d) Total	= 1.002

(8) Items 1 through 5 modify the three terms and the total of the pure premium index in 7 as follows:

(a) $(.814 \times .97 \times .96 \times 1.05)$	= .796
(b) $(.253 \times .97 \times .96 \times .90)$	= .212
(c) $-(2 \times .97 \times .96 \times .065)$	= <u>-.121</u>
(d) Total	= .887

(9) The effect on auto data basic protection pure premium of including items 1 through 5 is:

(a) $(.796 - .121) \div (.814 - .065)$	
or $.675 \div .749$	= .901
(b) $.212 \div .253$	= .838
(c) Total, $.887 \div 1.002$	= .885

(10) The effect of item 6 on average claim cost is a reduction of approximately  $\$23 \div \$677 = .03$  (auto and workmen's compensation data); the factor applicable is .97.

(11) Adjusted Table 2 recognizes the effect of the foregoing adjustments on the more conservative Table 2 in the report. As a note of caution, some of the elements in items 1 through 6, while reasonable, may not be subject to actuarial proof at the present time.

**APPENDIX B**  
**ADJUSTED TABLE 2**  
**NEW YORK STATE**  
**DISTRIBUTION OF AUTOMOBILE BODILY INJURY PURE PREMIUMS**  
**AND RELATIVE COSTS OF**  
**AUTO LIABILITY VS. BASIC PROTECTION**

	Present Liability	Basic Auto Data	Protection Auto and W.C. Data
<b>BEFORE CONDITIONAL ADJUSTMENTS<sup>1</sup></b>			
1. Indemnity (including uninsured motorist) .....	\$46.23	\$40.06	\$32.32
Medical .....	6.50		
2. Allocated claim .....	6.89	12.92	12.92
TOTAL .....	\$59.62	\$52.98	\$45.24
<b>CONDITIONAL ADJUSTMENTS<sup>2</sup></b>			
3. Line 1 .....		.675 ÷ .749 or .901	
4. Line 2 .....		.212 ÷ .253 or .838	
<b>AFTER CONDITIONAL ADJUSTMENTS</b>			
5. Indemnity 1 × 3 .....		\$36.09	\$28.26 <sup>3</sup>
6. Allocated claim 2 × 4 .....		10.83	10.83
7. TOTAL .....	\$59.62	\$46.92	\$39.09
8. Ratio to total present .....	100%	79%	66%
9. Increment to purchase \$10,000/\$100,000 limits <sup>1</sup> .....	9%	9%	9%
10. Relative cost of \$10,000/\$100,000 limits .....	100%	88%	75%

Notes: <sup>1</sup> See Table 2.

<sup>2</sup> See description of items in Appendix A, particularly items 7, 8, 10 and 11.

<sup>3</sup> \$28.26 obtained by applying the ratio of workmen's compensation average cost per case limited to \$10,000 (\$677 reduced by .03 for Appendix A, item 10) to automobile bodily injury average claim cost excluding allocated claim expense (\$839) to auto data pure premium; \$677 × .97 = \$657.783; .783 × \$36.09 = \$28.26.