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CONTENTS OF VOLUME XLIII

NOTICE

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PROCEEDINGS

May 24-25, 1956

INSURANCE LANGUAGE PROBLEMS

PRESIDENTIAL ADDRESS BY NORTON E. MASTERSON

In advocating a better language for understanding and recording the complex multiple line fire and casualty business, a suitable opening quotation or text might be this one from Aristotle: "A likely impossibility is always preferable to an unconvincing possibility." My inspiration for this paper came not from this Greek philosopher but from papers of two ex-presidents of this Society—Syd Pinney's "What is so peculiar about an Actuary," and Tom Carlson's "Plain Talk."

In fact a large part of this paper might sound like it should have been titled, "Plain talk on what is so peculiar about an actuary's *critics*." Such impression would have been contrary to my inborn midwestern tolerance of those who misunderstand because I desire to emphasize the correction rather than the criticism.

We can learn much from criticism if we put it to constructive use. That results only when it leads to corrective action; otherwise criticism becomes a parallel adjunct to the thing criticized, inseparable and almost indistinguishable; like limburger cheese and its odor, taxes and their resistance, weather and complaints thereon.

* * *

This is a most unique organization as to diversity of membership. It includes actuaries and officials in various fields: fire, casualty and some life insurance companies; stock, mutual, state fund, hospital service and reciprocal organizations; state and company rating bureaus; state and federal government departments; independent consulting actuarial firms; colleges and universities; and non-insurance organizations.

Our constitution states that the Society shall take no partisan attitude, by resolution or otherwise, upon any question relating to insurance. In view of the diversity of interests, employment in competing companies and conflict of objectives as to private and state enterprise and as to the regulator and the regulated, that provision of non-partisanship is a necessary professional standard.

This code of non-partisanship and the diversity of membership makes our Society an outstanding professional forum for objective discussion and thinking about the fire and casualty insurance business. We can and should make use of the all-embracing character of our membership for the consideration of problems resulting from misunderstanding or the absence of a common language of communication.

One type of these problems relates to insurance prices or ratemaking where we have not been as effective in furthering public understanding of our prices and costs as have most commercial and industrial organizations.

A professional society composed of actuaries of companies, actuaries of rating bureaus and actuaries of state insurance departments, can do much to explain our insurance rating or pricing to the public with the objective of securing greater understanding and appreciation of our price problems.

There are two obstacles to hurdle—the actuarial peculiarities of insurance as a business and the meaning of words we use to explain our prices and way of doing business.

The insurance business is unlike commercial and manufacturing businesses and requires different methods of determining costs and establishing prices or premiums. Our prices are not determined as are the prices of our insureds in the conduct of their personal or business pursuits.

A short review of the characteristics of insurance prices will emphasize the nature of fire and casualty insurance as well as the differences from commercial and manufacturing, and even professional services. We deal in future contracts of performance, determining our price prior to performance; while in most other businesses the product is delivered prior to payment. Fire and casualty insurance premiums must provide for costs of future events, which, unlike insurance on lives, may or may not occur. The cost of the insurance service promised is greatly disproportionate to the price paid; you may pay only eight cents per $100 of fire insurance or only $30 for $300,000 of automobile bodily injury coverage. Future financial solvency is more important than current net price because the contract is not complete at time of sale. We are regulated by calendar year accounting periods but run a future performance business with ultimate settlement of obligations stretching far beyond each accounting year.

Considering all of these unusual characteristics of insurance prices, one could expect difficulty in explaining actuarial bases for insurance premiums to the public. But because of the uncertainty of ultimate costs, you would not anticipate much difficulty in justifying reasonable margins for profit and contingencies.

Unfortunately, that is not the case. In fact, profit or cost accounting margins as low as 2½% to 6% and contingent upon uncertain future events, often meet with more resistance than much higher margins on luxuries, instalment interest, automobiles, homes and other items of budgetary interest to the buying public. But even these relatively low margins for insurance profit and contingencies are subject to future risk. Ours is a risk-bearing business without escalator clauses for the abnormal and the unpredictable.

A few startling examples of comparative attitudes toward insurance and other prices will illustrate.

I have been an interested observer of two recent price changes involving home owners in a midwestern state. The first involved a revision of dwelling fire and extended coverage rates. The rates prepared by the rating bureau provided for a decrease in fire and an increase in extended coverage rates, with state insurance department approval being held up by reason of its counter-proposal of a greater decrease in fire and a lesser increase in extended coverage rates. The press news and editorial presentation or interpretation of the rate change made by the bureau was that a combined premium for $10,000 on a frame house for three years in a city will "go up $7.50." For several months this matter has been a controversial subject at hearings and in the press.

The other price change affecting many of these home owners was an increase of five cents in the Sunday edition of a large metropolitan newspaper in this same midwestern state. This price increase will amount to $7.80 for three years and was made with a simple announcement that the change was necessary because of price increases in newsprint tonnage, coupled with rising production costs. But why was there an immediate public approval of an increase in newspaper expense while the equivalent combined price decrease in fire and increase in extended coverage insurance became a controversial issue? Undoubtedly, because there was an understanding of newsprint and newspaper production costs while there exists a mystery about fire and extended coverage insurance rates.

The fire rate proposed by the bureau was eight cents and the counter proposal was six cents per $100. Both are almost beyond the reaches of chance and probability and remind me of a comment by one of our fire insurance actuaries in his paper a few years ago. Assuming a permissible loss ratio of 50%, an eight cent rate provides for a total loss only once in 2,500 years. It was only 2,000 years ago that Nero fiddled while watching a panorama of uninsured fire losses in Rome!

Without considering the merits of this and similar differences in rate change recommendations, it is significant that we are expected to produce rates with tolerances lower than five cents a week for combined hazards of fire and wind. Fire actuaries really have to know which way the wind blows these days, as well as to appraise the potential incendiary ratio in over 20,000 cigarette butts the package-a-day housewife may drop carelessly in three years!

Another example of divergent thinking between insurance and non-insurance prices is in another midwestern state which engages, among others, in two state enterprises—workmen's compensation insurance in a compulsory state fund, and the liquor business in a liquor store system.

In its price system for workmen's compensation insurance, the rate or price provides for losses only, with no tax loading and with the expense loading being absorbed by the general taxpayers. But for the state liquor store system, the director reported that in 1955 the breakdown of the retail price of an average fifth of liquor selling at $3.19 was $.60 for liquor cost, $2.01 for taxes, $.44 for state mark-up, $.10 for a mental health program, and $.04 for freight and handling. In our actuarial language that is a "pure premium" of .19, an expense loading of .18, and a tax loading of .63.

I leave this contrast in conflicting theories in the establishment of state prices for your actuarial study; but I am intrigued with the thought of borrowing the idea of a mental health loading to be used for bureau actuaries trying to make acceptable rates today!

A third example relates to the attitudes of some associations of manufacturers or commercial enterprises toward workmen's compensation insurance rates. Certain managers or executive secretaries of such trade associations try to make regular studies of insurance costs for their members based not upon actuarial methods but upon their more familiar business cost accounting methods. On many public and economic issues these associations and the insurance business have common problems and similar policies and beliefs as to our economic system.

However, in workmen's compensation rates covering the classifications of interest to the members of a particular trade association, there is at times an adverse attitude toward insurance rate-making methods. I recall two instances where trade associations made official protests about insurance rates for their respective trade members. Even though the association members operated businesses with typically high profit margins before taxes, there was a protest against the margins for profit and contingencies in workmen's compensation rates. The total cost of workmen's compensation was not a significant item in their total cost of production, being negligible compared with labor, material, and tax costs. In addition, the workmen's compensation rates for most of the association members were subject to a number of rating plans and dividend bases recognizing favorable individual risk costs of these insureds.

We need to do a better job of explaining the elements of an insurance rate. The rough division of *loss cost* and *expense loading* can be very misleading. Some reports in the press have created the impression at times that the difference between premiums received and losses paid represents "profit" to the insurer. In our language for the public we should classify disbursements not simply as losses and expenses but as to (a) direct benefits to insureds, and (b) expenses and taxes. Under direct benefits to insureds should be included loss payments, loss adjustment expenses, loss prevention costs, other direct services to insureds, and rating credits and dividends to policyholders. In the second category would be company expenses and federal and state taxes. National Council state rate filings now emphasize this new concept of premium rate elements by designating the portion "for the direct benefit of the employer and his employes."

As another approach to creating a better understanding of our costs and prices, and in further consideration of a common language, we might try to explain our costs in more common economic terms.

To supplement our insurance and actuarial terminology of losses and loss adjustment expenses, we could exhibit fire and casualty insurance companies as huge purchasers of the following goods and services: automobiles, including tires, repair parts and body rebuilding; roofs, lumber and other building materials; doctors' fees and other medical expense, hospital care and rehabilitation; loss of time wages; high court verdicts and damages; plate and safety glass; personal effects; loss prevention; lawyers' fees, legal and court costs.

Expenses would be shown not only as loadings by functional groups in insurance terminology but in terms of salaries and wages, commissions, welfare and pensions, travel, rent, office equipment and supplies, paper and printing, postage, telephone and telegraph, and with special emphasis on various forms of taxes.

Thus our disbursements for losses and expenses become more understandable as affected by external economic conditions particularly price levels and wage or salary levels.

In the above more common language, premium taxes are revealed in new perspective on workmen's compensation and group insurance where the premium cost is predominantly for wage loss, medical and hospital care and rehabilitation. They are sales taxes on wage indemnity and medical care for injured workmen, widows' annuities, doctors' fees, family medical and hospital care—none of which is a proper base for general revenue taxation.

Another somewhat different "language" phase of our business does not involve public attitudes or misunderstanding. The entire problem is within our own insurance family of companies, bureaus and state insurance departments. It is in the new field of electronic data processing where we must modernize and stream-line company office bureau and insurance department records and requirements to eliminate barriers in the way of a common language in programming transactions. I refer particularly to minor or nuisance variations and exceptions of no significance in the effective regulation of insurance carriers, of no significance in policyholder protection and of no significance in rate, coverage or contract provisions.

Two years ago our research committee prepared a progress report on electronics and observed that the "fire and casualty insurance business would seem to be right now on the threshold of some radical changes arising out of the development of large-scale electronic devices and equipment auxiliary thereto." One of the significant conclusions of this report was that the insurance product must be simplified as a prerequisite to advantageous and economical usage of electronic equipment. In this matter of product simplification, the report concluded that:

"Standardization of company procedures involves many difficult management decisions as to how the insurance industry will merchandize its product and many other decisions involving the public relations aspects of the business. At the present time, in all states, the standard automobile form has too many optional coverages and rating bases available to the public, so much so that there is serious doubt in our minds as to whether the fruits of mechanization can be effectively and economically applied to this business as it is now operated." The conversion of traditional manual procedures to mechanical standardization requires the elimination of exceptions to assembly-line procedures.

Two types of procedural exceptions hinder the effective utilization of electronic data processing. One is the non-standard nature of our insurance transactions; the other is the variation caused by state, bureau, and other regulatory exceptions.

What can we do about it? First, we could utilize the advantage of our diversified membership to tackle in round-table discussion the vexing problems of insurance transaction and state exceptions. As I pointed out earlier, our membership embraces company actuaries, bureau actuaries, and state insurance department actuaries. These three groups represent the important segments of the fire and casualty insurance business which are in a position because of knowledge and authority to revise our traditional methods and procedures to make them adaptable to electronic data processing. With such cooperative impetus, I can envision representative meetings of company people and bureau representatives to resolve transaction exceptions, and of insurance department-company zone meetings to resolve state exceptions. These round-table sessions could bring together the regulators and the regulated, the overlapping bureaus, and the conflicting states. Zone consensus recommendations would then go through regular National Association of Insurance Commissioners channels for national consideration.

There is a common interest in the simplification of the insurance transaction language to facilitate electronic data processing by the companies, the bureaus and the state insurance departments. All three groups are interested in reducing expenses, speeding up the processing of data, and the development of more adequate research data.

The greater use of high-speed electronic equipment to reduce the time-lag in ratemaking responsiveness should be one of our objectives. Perhaps some day the incurring of an automobile bodily injury claim in a far western state could, within a short space of time, be reflected and recorded upon an electronic automobile accident statistics board in a New York City rating bureau. Prompt and up to date indexes of day to day happenings affecting insurance costs would result in current statistics to serve as developmental or trend supplements to official insurance experience records.

If the fire and casualty insurance business is to keep pace with other major businesses in the reduction of paper-work costs, it is imperative that we work toward a common language of data recording. Nor is a major change needed to accomplish a common language; but rather it is the elimination of "dialects" in product descriptions and individual state regulatory data.

* * *

This has been a presentation of two problems of interest to us as members of a professional society and of interest to the organizations in which we are employed. The first related to the need for a more common language of understanding of price and related problems. The second was the urgent need for a common language of data processing for effective utilization of modern electronic equipment. Since these problems affect all segments of the fire and casualty insurance business, both insurance companies and regulatory organizations, they are a challenge to a non-partisan professional actuarial society. In his book on semantics entitled, "Your Most Enchanted Listener," Wendell Johnson has given me my closing text: "And if we then insist on answers we can trust we shall grow wise in finding them."

A REVIEW AND COMPARISON OF WORKMEN'S COMPENSATION EXPERIENCE IN NEW YORK STATE AND WISCONSIN

BY FRANK HARWAYNE

In an attempt to get at the underlying facts concerning the difference in Workmen's Compensation cost between New York State and Wisconsin, a study has been undertaken with respect to the specific law provisions and also with respect to the actual experience.

Legal Basis

With respect to the law as of the present date (January 1956) there are some differences between the two states. These are readily apparent in Exhibits A through D which are based on *Analysis of Workmen's Compensation Laws* prepared by the U. S. Chamber of Commerce. In New York State there is no limitation as to the length of time benefits are payable to widows, whereas in Wisconsin benefit payments are limited to 1000 weeks for widows under age 50, graduating down to 500 weeks at higher ages. The rate of benefits to widows is subject to a maximum of $24.00 per week in New York, and $32.50 per week in Wisconsin. For a widow with children, the maximum is $40.00 per week in New York, and $32.50 per week in Wisconsin. In Wisconsin the rate of payment is 50% of average weekly wages for a widow or a child, subject to a maximum benefit of 50%. In New York the childless widow gets 40%; the orphan gets 30%; the maximum in any case is 66⅔%.

With regard to permanent total awards, benefits are payable for life in both states. In New York two-thirds of wages are paid subject to a $36.00 maximum per week. In Wisconsin 70% of wages is paid subject to a maximum of $45.50. As for temporary total cases, the percentage of wages and the maximum weekly amounts are identical to that for permanent total and are payable for the duration of the disability. In New York, total amounts are limited to $6500, whereas in Wisconsin no limit applies. In both instances additional amounts are available for vocational rehabilitation.

With regard to schedule awards for permanent partial disabilities, Wisconsin allows payments for temporary total disability in addition to the allowance for permanent partial, but New York allows payments for temporary total disability in addition to permanent partial awards, with certain deductions from the period of total disability. As a sample of the maximum amounts available in New York, loss of an arm at the shoulder may cost up to $11,232, whereas in Wisconsin the comparable amount is $18,500. Loss of a thumb in New York may go up to $2700 and up to $4625 in Wisconsin. Loss of hearing in both ears may go up to $5,400 in New York and $12,333 in Wisconsin.

In both New York and Wisconsin, payments of medical cost are payable without limit.

In New York there is a seven day waiting period which is eliminated if the injury lasts more than 35 days. In Wisconsin the waiting period is only three days and is eliminated if the injury lasts more than 10 days.

In a summary of all the foregoing instances it is apparent that the benefits available under the Wisconsin law compare favorably with those of the New York law.

Provisions Regarding Administration

With regard to the manner of claim settlement, there appears to be a marked difference between the two states. In New York State claims are settled by the Workmen's Compensation Board. On application, the Board must grant a hearing. Where there is a thirty days' default or a refusal, a claim for the commuted value is filed with the County Clerk and judgment entered. Review may be had by the Board on application or on its own motion, and modification may be made by the Board at any time; special conditions may apply. In Wisconsin claims are settled by agreement or compromise, subject to review by the Industrial Commission within one year. Disputed cases are settled by the Commission, the Commissioner or an Examiner. Judgment is rendered in Circuit Court on presentation of a certified copy of the award. The Commission may review an award made by an Examiner, or the Commissioner within 20 days. It may also review an action on its own motion within 20 days. Compromises may be modified within one year, except that occupational disease is subject to review within 6 years. Attorneys' fees are limited to 20% of recovery, unless previously authorized by the Commission. If there is admitted liability, fees are limited to 10%, but not more than $100. In New York attorneys' fees must be approved by the Board.

It is quite possible that the ability of the insurance carrier to make agreements and compromises with the injured workman affects insurance costs.

Comparison of Experience

As for the experience in the two states, a careful survey of the experience for policy years 1951 and 1952 has been made, as well as a review of manual rates. In order to reap the benefit of aggregates approximately 45 classifications were considered, these classifications being the same ones which were analyzed by Mr. Roger Johnson in the Spring of 1953. Also, in order to make the figures comparable between the two states, the concentration of relatively high hazard business in Wisconsin has been taken into account by weighting the Wisconsin experience by classification by the New York volume for each of the forty-five classifications. As a check on the procedure, New York experience was also averaged on the basis of the distribution of business in Wisconsin. In both instances the comparisons are revealing. For ease of understanding and in order to emphasize the general magnitude of the figures, the percentages following are those of Exhibits 1 through 4, rounded to the nearest 5%. The average rate for these 45 classifications in Wisconsin is approximately 45% below the average rate in New York. Of equal importance is the fact that the proposed pure premium, that is the provision in the rates for loss cost per $100 of payroll in Wisconsin is 55% below that in New York. In New York the proposed pure premium represents 70% of the average rate, whereas in Wisconsin it represents only 55% of such rate. In other words, it can be said that insurance costs are higher in New York than they are in Wisconsin, but it is equally true that a greater proportion of the manual dollars charged in New York are incurred in benefits than of the dollars charged in Wisconsin.

In Wisconsin carriers incur 55% less than they incur in New York for the payment of serious cases, and 60% less for indemnity cases as a whole. Medical costs are 40% below New York costs. On a combined basis, Wisconsin costs are 55% below New York costs. This of course, means that actual costs in New York are more than double those of Wisconsin, in spite of the maximum amounts available under the Workmen's Compensation Laws.

A somewhat different analysis of the loss cost components of relative claim frequency and average claim cost is informative. Concerning frequency, in Wisconsin the incidence of serious claims is 40% to 45% below that of New York, whereas the incidence of non-serious claims is 5% to 15% below. On a combined basis, Wisconsin frequency is 5% to 15% less than that of New York for indemnity cases. Apparently the marked difference in cost between New York and Wisconsin cannot be attributed in any great measure to the incidence of claims, although it must be admitted that the infrequent serious claim has exerted some influence on the total cost.

It is in the average claim cost that we find rather large differences. In Wisconsin the average cost of a serious claim runs 20% to 25% below that of New York. Even more significantly, the average cost of a non-serious claim in Wisconsin runs 55% to 60% below the average cost in New York.

The magnitude of these differences appears to be contrary to the conclusions reached through a survey of the benefits made available by the Workmen's Compensation Law. The Wisconsin law makes available benefits both more frequent and more costly than the New York law. It is surprising to find that in actual practice the costs seem to run the other way. That such costs are real and not fictional, we can be assured of when we examine the run-off of losses. In New York State the rate making practice has been to incorporate loss developments up to fifth report, which is 66 months after the policy has expired. We find that adjustments have been consistently upward on each successive reporting, and necessarily conclude that the losses are real and do not represent padding on the part of the companies. In further support of this, the New York supplementary insurance expense exhibit likewise confirms this fact. Since the difference does not appear to be explainable on the basis of the provisions in the benefits payable under the Workmen's Compensation Law, it would appear that the difference in cost must be attributed to the difference in practical operation of the law, in insurance carriers' interpretations of the operation of the law, or in actual difference in hazard for the same operations (i.e. lesser standards of safety).

Whatever the cause, it does seem apparent that costs in New York State exceed those in Wisconsin. It seems unfortunate that some employer and employee groups have labelled such costs as excessive, because the foregoing analysis would seem to indicate that these costs are actually benefits being afforded to the injured workmen in New York State.

Exhibit A

ANALYSIS OF WORKMEN'S COMPENSATION LAWS

Benefits for Widows and Children

	New York	*Wisconsin*	*Remarks*
Maximum Period:	Not Specified	1000 weeks	N. Y. Payable until death or remarriage. Wisconsin reducing period over age 50. Maximum reduction 50%.
Maximum Per Week:			
Widow Only	$24.00	$32.50	
Widow and Children	40.00	32.50	
Maximum Amounts:			
Widow Only	No limit	See Remarks	Wisc. 4 times avg. annual earnings, not to exceed 70% of weekly wage for maximum period. Aggregate for children 4 times average annual wage, to accrue at rate of 13% of surviving parent's indemnity.
Widow and Children	No limit	See Remarks	
Minimum Per Week:			
Widow Only	$ 5.00	$10.00	
Per Cent of Wages:			
Maximum	66⅔%	50%	Wisc. aggregate amount calculated on basis of 70% of avg. annual wage. Weekly installments payable 50% of avg. weekly wage.
Widow Only	40	50	
One Child Only	30	50	

Exhibit B

WORKMEN'S COMPENSATION

Benefits for Permanent and Temporary Total Disabilities

	New York	*Wisconsin*	*Remarks*
Maximum % of Wages	66⅔%	70%	Additional Compensation for vocational rehabilitation.
Maximum Weekly Payment	$36.00	$45.50	
Minimum Weekly Payment:			N. Y. actual wage if less.
Permanent	15.00	14.00	
Temporary	12.00	8.75	
Time Limit:			
Permanent	Life	Life	
Temporary	Disability	Disability	
Amount Limit—Temporary	$6500	None	

Waiting Period and Medical Benefits

Waiting Period	7 days	3 days	If disability continues for longer than retroactive period compensation is paid for the waiting period.
Retroactive Period	35 days	10 days	
Medical Benefits—Limitations	None	None	
Artificial Appliances Furnished	Yes	Yes	

Exhibit C

WORKMEN'S COMPENSATION

Maximum Amounts Which Could be Paid in Dollars for Scheduled Injuries

	New York	*Wisconsin*
Arm at Shoulder	$11,232	$18,500
Hand	8,784	14,800
Thumb	2,700	4,625
First Finger	1,656	2,160
Second Finger	1,080	1,665
Third Finger	900	962
Fourth Finger	540	1,036
Leg at Hip	10,368	18,500
Foot	7,380	9,250
Great Toe	1,368	3,083
Other Toes	576	Scheduled
One Eye	5,760	10,175
Hearing One Ear	2,160	1,850
Hearing Both Ears	5,400	12,333

Remarks

New York: Compensation for temporary disability allowed in addition to permanent partial disability with certain limitations as to period.

Wisconsin: Based on employees 50 years of age or less. Additional weeks compensation for healing period. Compensation for temporary disability allowed in addition to allowance for permanent partial disability.

Exhibit D

WORKMEN'S COMPENSATION
STATUTORY PROVISIONS

	New York	*Wisconsin*
Administration	Workmen's Compensation Board.	Industrial Commission.
Notice to Employer	In writing within 30 days; excusable.	Within 30 days, excusable.
Claim Filing	Within 2 years after accident or death.	Within 2 years after injury or death; all rights barred after 6 years from injury, death or last payment. Excusable if employer knew of disability.
How Claims Are Settled	By Board; on application board must grant hearing. In default or refusal claim for commuted value filed with county clerk and judgment entered.	By agreement, or compromise subject to review by Commission within 1 year. Disputed cases settled by Commission, Commissioner or examiner.
Award Effect	Judgment on 30 day default.	Judgment in Circuit Court on certified copy of award.
Review by Agency	By Board on application or own motion.	By Commission within 20 days from examiner or Commissioner.
Modifications	By Board at any time. Subject to special conditions.	By Commission on its own motion within 20 days, compromises may be modified within 1 year. If occupational disease, subject to review within 6 years.
Court Appeals	To Appellate Division of Supreme Court 30 days; further appeal to Court of Appeals.	To Circuit Court for Dane County within 30 days; further appeal to Supreme Court.
Attorney Fees	Enforceable on approval of Board.	Limited to 20% of recovery unless previously authorized by Commission. If admitted liability not to exceed 10% or $100.

Exhibit 1

45 CLASSES NEW YORK AND WISCONSIN WORKMEN'S COMPENSATION DATA

AVERAGE RATES AND PROPOSED PURE PREMIUMS APPLICABLE AS OF JANUARY 1, 1956

	On New York Distribution of Payroll			*On Wisconsin Distribution of Payroll*		
	New York	*Wisconsin*	*Change*	*New York*	*Wisconsin*	*Change*
Average Rate	$1.201	$.673	—44%	$1.797	$.969	—46%
Proposed Pure Premiums						
Serious	$ .246	$.087	—65%	$ .380	$.133	—65%
Non-Serious	.372	.161	—57%	.547	.229	—58%
Indemnity	$ .618	$.248	—60%	$ .927	$.362	—61%
Medical	.230	.134	—42%	.331	.183	—45%
Total	$ .848	$.382	—55%	$1.258	$.545	—57%
Ratio Total Proposed Pure Premiums to Average Rate	71%	57%		70%	56%	

Exhibit 2

45 CLASSES NEW YORK AND WISCONSIN WORKMEN'S COMPENSATION EXPERIENCE

POLICY YEARS 1951 AND 1952 PURE PREMIUMS ADJUSTED FOR ADOPTED DEVELOPMENT FACTORS

		On New York Payroll Distribution			*On Wisconsin Payroll Distribution*		
		New York	*Wisconsin*	*Change*	*New York*	*Wisconsin*	*Change*
Serious:							
	1951	.217	.099	—54%	.352	.146	—59%
	1952	.159	.070	—56%	.231	.112	—52%
	1951-2	.188	.085	—55%	.290	.128	—56%
Non-Serious:							
	1951	.392	.161	—59%	.578	.242	—58%
	1952	.408	.159	—61%	.589	.221	—62%
	1951-2	.400	.161	—60%	.584	.231	—60%
Indemnity:							
	1951	.609	.260	—57%	.930	.388	—58%
	1952	.567	.229	—60%	.820	.333	—59%
	1951-2	.588	.246	—58%	.874	.359	—59%
Medical:							
	1951	.234	.140	—40%	.336	.197	—41%
	1952	.215	.132	—39%	.306	.176	—43%
	1951-2	.224	.137	—39%	.321	.186	—42%
Total							
	1951	.843	.400	—53%	1.266	.585	—54%
	1952	.782	.361	—54%	1.126	.509	—55%
	1951-2	.812	.383	—53%	1.195	.545	—54%

Exhibit 3

45 CLASSES NEW YORK AND WISCONSIN WORKMEN'S COMPENSATION EXPERIENCE

POLICY YEARS 1951 AND 1952 ON NEW YORK DISTRIBUTION OF PAYROLL

		Frequency per million $ payroll			*Average Claim Cost*		
		New York	*Wisconsin*	*Change*	*New York*	*Wisconsin*	*Change*
Serious:							
	1951	.18	.11	—39%	12,097	9106	—25%
	1952	.15	.09	—40%	11,165	8244	—26%
	1951-2	.16	.10	—38%	11,680	8478	—27%
Non-Serious:							
	1951	6.20	6.10	— 2%	633	264	—58%
	1952	6.04	5.72	— 5%	675	278	—59%
	1951-2	6.12	5.89	— 4%	654	273	—58%
Indemnity:							
	1951	6.38	6.21	— 3%	956	421	—56%
	1952	6.19	5.81	— 6%	917	401	—56%
	1951-2	6.28	5.99	— 5%	937	410	—56%

Exhibit 4

45 CLASSES NEW YORK AND WISCONSIN WORKMEN'S COMPENSATION EXPERIENCE

POLICY YEARS 1951 AND 1952 ON WISCONSIN DISTRIBUTION OF PAYROLL

		Frequency per million $ payroll			*Average Claim Cost*		
		New York	*Wisconsin*	*Change*	*New York*	*Wisconsin*	*Change*
Serious:							
	1951	.28	.15	—46%	12,300	9508	—23%
	1952	.20	.12	—40%	11,109	9043	—19%
	1951-2	.25	.14	—44%	11,754	9294	—21%
Non-Serious:							
	1951	9.46	8.32	—12%	611	291	—52%
	1952	9.06	7.49	—17%	650	293	—55%
	1951-2	9.27	7.90	—15%	630	292	—54%
Indemnity:							
	1951	9.74	8.47	—13%	822	454	—45%
	1952	9.26	7.61	—18%	820	431	—47%
	1951-2	9.52	8.04	—16%	821	449	—45%

A HISTORY OF THE UNIFORM AUTOMOBILE ASSIGNED RISK PLAN

By
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Automobile Assigned Risk Plans have become one of the most important facilities of the Automobile Liability Insurance Industry. It is undoubtedly true that no facet of the business has consistently been the object of more interest and attention. The plans perform the extremely necessary function of bridging the gap between the voluntary insurance facilities and the needs of the insuring public. They are extremely sensitive to changes in market conditions and to general economic situations, and their populations generally rise and fall in keeping with the times. The structure of the plans has been subject to almost constant change to meet the demands placed upon them by public need and the resulting evolution has continued virtually unabated for nearly the last twenty years, and the ever changing complexion of the plans has been an interesting process.

During the last ten years much has been done by the Industry on a national scale to bring about a higher degree of uniformity in the major provisions of plans, including the development of a Uniform Automobile Assigned Risk Plan.

The quest for standardization grew out of the variations between plans and the various interpretations of their provisions. Much advantage and benefit would accrue from greater uniformity and the Industry has exerted major efforts in the attempts to attain that objective. That objective was attained and a Uniform Plan was developed.

It is the purpose of this paper to set down a historical account of the origin and evolution of assigned risk plans and of the things which lead up to the development of the Uniform Plan, as well as the amendments which have subsequently been made in it. As a matter of fact, this paper has been confined to that plan, and no attempt has been made to discuss other plans or to make comparisons between them except to the extent necessary in connection with plans which became effective prior to 1948.

Historically, the first automobile assigned risk plan was introduced in New Hampshire in 1938, and this account will begin with the developments entering into its creation.

The basic pattern of this plan was established in Workmen's Compensation Insurance in connection with the undesirable risk problem that existed in that field and which manifested itself with the enactment of workmen's compensation laws. These laws imposed liability on employers for injuries to employees sustained in the course of employment. The laws required employers to discharge their obligations either through insurance or by qualifying as self-insureds. Most risks were able to satisfy the requirements through those methods but the remainder included those unable to insure and they created the rejected risk problem. Some of the compensation laws which had been enacted contained within themselves the means for compliance to the exclusion of any other methods. Those laws made insurance facilities available only through state funds created thereby. Such states became known as Monopolistic Fund States because they by law were given a monopoly on the compensation insurance business. Other laws created state funds but they also allowed the private carriers to operate competitively between themselves and with the state funds. Those states were referred to as Competitive Fund States. In all other states the furnishing of insurance facilities was left to the private carriers.

The Industry fully appreciated that the existing system of insurance could not and would not permit the uninsured risk problem to remain unsolved. It was felt neither desirable nor necessary from the Industry standpoint that compulsory legislation serve as a solution to the problem. Ensuing studies consumed considerable time and effort, and as a result assignment procedures felt to offer the most satisfactory solution were developed.

There was ready acceptance of the principle that the burden of providing insurance to such risks should be borne by all carriers. One possible means of handling the problem was through a pooling of premiums and losses on risks unable to insure through normal channels among all licensed carriers in the State.

Another method considered was a plan under which risks would be assigned to carriers and in which each carrier would retain all premiums and pay all losses for its own account. The latter method was preferred by the carriers.

The agreed plan was a voluntary undertaking participated in by all licensed carriers and which became effective when all licensed carriers had subscribed to its provisions.

There were two fundamental purposes of the plan. One was to make insurance available under certain conditions to risks which were unable to secure it for themselves and the other was to distribute those risks equitably among the carriers.

The compensation plans were made available to all risks who were in good faith entitled to insurance, except those engaged in underground coal mining. Good faith was the standard of eligibility for assignment but there were other requirements incident to assignment. They included a signed application which required complete rating and financial information of each risk; as evidence of the inability to insure, three letters of rejection from carriers; payment in advance of the estimated premium to the carrier before a policy would be issued; agreement to comply with reasonable safety requirements and to cooperate with the carrier in the reduction of losses, and a statement that they were not indebted to any carrier for compensation premiums contracted for in a prior period.

Risks were to be distributed among the carriers in proportion to the ratio which their individual premium writings for compensation insurance bore to the total premiums of all carriers. This method was deemed to be the most equitable means of spreading the volume of assigned risk business over the Industry.

Rules respecting cancellation of risks by the carriers were deemed necessary in the public interest and were therefore included.

The plan was to be administered by the National Council on Compensation Insurance or by a Rating Organization created by the statutes. The costs of administering the plan were to be borne by the carriers on the same basis that risks were distributed and assigned.

The plan made no provision for a commission or acquisition allowance to a producer for two reasons. First, the system contemplated that manual rates would be charged, and in anticipation of higher loss ratios on the class of business, that the entire premium dollar should be available for losses and company expenses. Second, because the Industry did not feel it was wise to pay commissions on business which carriers would not insure on a voluntary basis.

NEW HAMPSHIRE PLAN

The New Hampshire Plan was created to meet the rejected risk problem expected to develop as the result of the enactment of an Automobile Financial Responsibility Law. That law, like the compensation laws, imposed requirements on individuals who became subject to it for the furnishing of proof of financial responsibility for the future. And again like the compensation laws two means of compliance were available—automobile bodily injury and property damage liability insurance or through self-insurance by the deposit of money or securities in an amount stipulated by the State. Few risks had the financial ability to comply through the latter method and therefore as a practical matter insurance would furnish the only means of compliance.

Risks unable to insure complained to the Insurance Commissioner who at that time was the Hon. Arthur W. Rouillard. He felt that while not all risks were insurable, there were some who were, and accordingly conferred with the Industry, and after many conferences, a plan was agreed upon which closely followed the compensation plans. In the development of the plan the Industry relied heavily on their experience in connection with the workmen's compensation plan.

Eligibility—The major question which the conferences attempted to decide was with respect to what risks, out of those unable to insure, should be eligible for assignment. The final decision was as follows:

1. The Plan shall apply only to risks that in good faith are entitled to such insurance. A risk shall not be considered to be in good faith entitled to insurance nor shall coverage be extended in any case in which the applicant or any one who will drive the automobile has

   (a) Been convicted more than once during a three-year period immediately preceding the date of application for any one or more of the following offenses:

Driving a motor vehicle while intoxicated.
Failing to stop and report when involved in an accident.
Homicide or assault arising out of the operation of a motor vehicle.
Driving a motor vehicle at an excessive rate of speed where injury to person or damage to property actually results therefrom.

(b) A major physical disability.

(c) Failed to meet all obligations to pay automobile bodily injury and property damage liability insurance premiums contracted during the previous 12 months.

This section of the Plan represented the thinking of the Industry in determining standards for assignment which differed substantially from the standards in the workmen's compensation plans. The standards thus erected were means by which applicants seeking insurance could be screened as the enforcement of motor vehicle laws could not be relied upon to accomplish the purpose.

This first eligibility section should be carefully noted because it is the section of succeeding plans that has been subject to most revision. The process began with the New Hampshire Plan and today nearly twenty years later it is still going on.

Distribution and Assignment of Risks—This was the next most important part of the plan and it was to distribute the risks equitably among all carriers. As in the compensation plans, premiums were deemed to be the best yardstick. Provision to accomplish that objective was set up as follows:

> "The Manager shall distribute the risks which are eligible for coverage under this Plan among all carriers, the distribution by premium to be made proportionate, so far as practicable, to the respective combined automobile bodily injury and property damage liability premium writings of the carriers in the State of New Hampshire. In making such assignments due regard shall be given to the exclusions under reinsurance agreements, treaties or contracts filed in writing with the Manager by the individual subscribing carriers."

Commission—While the compensation plans made no provision for commissions, the fact that the number of risks assigned under the Auto Plan would greatly exceed compensation assignments, and in order to have the Plan operate effectively, the assistance and cooperation of agents and brokers was extremely necessary. It was felt the efforts they expended should not go uncompensated. Yet, from the Industry standpoint, the anticipated higher loss ratios from the class of business would leave no room for commission payment out of the premiums collected. Recognition was also given to the fact that the agents or brokers were actually operating in behalf of risks unable to insure, and it was therefore reasoned any acquisition payment to agents or brokers should be borne by the applicants in addition to the premiums which otherwise would apply. Out of the discussions the surcharges or additional charges as we now know them emerged in the following rule:

> Calculation of Premium, Commission and Surcharge—The designated carrier will determine the premium to be charged in accordance with Rule 8 of the Plan. Unless other special arrangements respecting commissions have been made with and approved by the Commissioner, the carrier shall add to the premiums determined in accordance with Rule 8 a surcharge to provide for commissions of 10% of the total surcharged premium to the licensed broker of record designated by the assured, and 2½% of the total surcharged premium, for countersignature, to the licensed agent of the company to which the risk has been assigned, together with sufficient allowance for taxes on the amount of the surcharge. Based on such commissions, and with due allowance for taxes, this amounts to a multiplier of 1.15 and is made in accordance with the following *approved* rule of procedure respecting commissions:
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> > "No commissions shall be payable on the premium for any risk assigned under this Plan except as may be provided by a surcharge approved by the Commissioner for that specific purpose; and if approval is given to a surcharge, the commissions shall not exceed 10% of the surcharged premium to a licensed broker designated by the assured, and 2½% of the surcharged premium, for countersignature, to the licensed agent of the Company to which the risk has been assigned."
>
> Any special increase in rate approved by the Insurance Commissioner in accordance with Rule 8, shall be in lieu of the fifteen per cent (15%) surcharge permitted under the plan.

Other Provisions—As respects the other provisions, it seems desirable to show them in their entirety as they are not long, and furthermore because to a large degree they have gone into the makeup of every plan which has come into existence since that time. They were set up as follows:

> This Plan shall become effective when all of the carriers writing both bodily injury and property damage liability insurance in the State of New Hampshire have subscribed thereto and shall apply only to risks that in good faith are entitled to such insurance.
>
> This Plan shall be available so far as non-residents of the State of New Hampshire are concerned, with respect to all automobiles registered in the State of New Hampshire; that

is, the place of registration rather than the residential address is to govern whether or not a risk is eligible for assignment under this Plan. Non-owners shall be eligible for assignment under the Plan provided they are required to have a New Hampshire license.

The following rules shall govern the insuring of New Hampshire risks which have been unable to obtain automobile bodily injury and property damage liability insurance.

1. Eligibility section already quoted.
2. No applicant shall be subject to this Plan unless within 60 days prior to the date of his application for insurance under this Plan he has applied for both automobile bodily injury and property damage liability coverage in writing to at least *THREE* carriers, including the carrying company if the risk is insured at the time of making the application, authorized to write such insurance in the State of New Hampshire and has been definitely refused coverage by such carrier in writing on the letterhead of the carrier and signed by a full-time salaried employee of the carrier.
3. The application for insurance under this Plan must be signed in every case by the applicant but may be submitted by the applicant or his broker. The application shall be filed on a prescribed form accompanied by copies of the applicant's letters soliciting coverage by such carriers, and the original letters refusing such coverage. Such application shall require:
   (a) Complete underwriting and character information; and complete financial information where the coverage sought is to be written on a basis requiring final adjustment of the premium subsequent to the expiration of the policy.
   (b) A statement by the applicant that he will maintain a complete record of his financial transactions in such form and manner as the carrying company may reasonably require and that such record will be available at all times to the carrier at a designated place. This statement shall be required only where the insurance is to be written on a basis requiring final adjustment of the premium after expiration of the policy.
   (c) That the applicant agrees to comply with all reasonable recommendations of the carrier made with the view to reducing the hazards of the risk.
   (d) That the applicant agrees upon being notified to remit within 15 days to the carrier a certified check, money order, or bank draft payable to the designated carrier for the full premium for his policy.

(e) Certification of the application by an affidavit to be sworn to before a Notary Public.

4. The Plan shall be administered by the Manager of the Portland, Maine Branch of the National Bureau of Casualty and Surety Underwriters (hereinafter referred to as the Manager).

5. Upon receipt of an application for insurance properly completed, signed and attested, the Manager shall designate a carrier to whom the risk shall be assigned and *so advise the broker of record.*

6. Within fifteen days after receipt of notice of designation from the Manager, the designated carrier shall notify the applicant either

   (a) That, if the full premium as stated within such notice is received within fifteen days or within such further reasonable period as the carrier may agree to, it will issue a policy to become effective 12:01 a.m. of the day following the day on which such premium as stated in such notice is actually received by the company, or

   (b) That it will not issue a policy for the reason that the applicant is not in good faith entitled to insurance under this Plan, *in which event the reasons supporting such action shall be filed with the Insurance Department of New Hampshire.*

   A copy of each such notice shall be furnished the Manager and in the event that the carrier refuses to insure the applicant a copy of the notice shall be furnished the Commissioner of Insurance of New Hampshire.

7. If after the issuance of a policy it develops that the applicant is not or ceases to be in good faith entitled to insurance or has failed to comply with reasonable safety requirements, or has violated any of the terms or conditions upon the basis of which the insurance was issued, or if unusual or unexpected circumstances develop, the carrier which issued the policy shall have the right to cancel the insurance in accordance with the conditions of the policy but in all such cases the reasons supporting such action shall be filed with the Manager and with the Insurance Department of New Hampshire prior to the effective date of cancellation.

   If default occurs in the payment of premium upon any policy subject to interim adjustment, such policy shall automatically be subject to cancellation in accordance with the customary five days' notice as provided in the policy. A statement of the facts in support of such action shall be furnished the Manager and the Insurance Department of New Hampshire.

8. All risks assigned under this Plan shall be subject to the rules, rates, minimum premiums, and classifications of the Manual in force and to the Rating Plans applicable. If the experience, physical or other conditions of any risk applying for coverage under this Plan are such as to indicate that the hazard of the risk is greater than that contemplated by the rates or minimum premiums normally applicable to the risk, the carrier may charge such rates and minimum premiums as are commensurate with the greater hazard of the risk, subject to approval by the Commissioner of Insurance.
9. If for any reason an assigned risk is cancelled, the risk shall not be eligible for further consideration until the Manager is fully satisfied that the risk is in good faith entitled to insurance under the Plan.
10. Any assigned risk which is dissatisfied with the designated carrier may request re-assignment upon expiration.
11. Every carrier insuring a risk under the Plan shall notify the Manager at least *THIRTY* days prior to expiration date when it is unwilling to renew the risk for its own account at the rates and classifications normally applicable. Any carrier may request discontinuance of an assignment on any risk by giving the Manager notice at least *THIRTY* days prior to expiration and giving reasons therefor.
12. If any carrier other than the one designated under the Plan wishes to carry the risk voluntarily at the rates and classifications normally applicable, such carrier may take over the coverage at expiration; or under the same conditions may take over the coverage at any time subject to agreement by the designated carrier.
13. No company shall issue a policy under this Plan for limits less than the standard limits of $5,000/$10,000 bodily injury, and $5,000 property damage, unless specific authorization is given in the individual case by the Insurance Commissioner of the State of New Hampshire, but no company shall be required to write a policy for limits higher than such standard limits unless they are required by the New Hampshire Financial Responsibility Law or any other Law of the State of New Hampshire applicable to such risk.

Mr. R. C. Shipley, Manager of the Portland office of the National Bureau, was appointed Manager of the Plan, and after the necessary subscriptions were received from the licensed carriers, it was put into effect on May 10, 1938. The volume of premium in the Plan in 1938 was $2,154 for bodily injury and $894 for property damage. The loss ratios were .585 and .633, respectively.

OTHER STATE PLANS

Following New Hampshire, Massachusetts was the next state to adopt a Plan which went into effect on November 16, 1939. A compulsory automobile bodily injury insurance law had been in effect in the state for several years, yet it had become apparent there would have to be some procedures devised for providing insurance to undesirable risks if the companies were to continue to furnish the only facilities for insurance. The Plan followed the New Hampshire Plan in many respects, but because of the unique situation in the state, it was necessary to draw the Plan agreeable to the actual conditions which existed. The Plan applied only to the coverage required by law which was bodily injury liability in limits of $5,000/$10,000 and applicable to accidents which occurred on the ways of the Commonwealth.

Maine was the next state where some risks were finding difficulty in insuring. The Commissioner of Insurance instituted conferences with the carriers as it became apparent that if a satisfactory solution could not be developed, legislation might be necessary to correct the situation. The Industry through the National Bureau and the Mutual Bureau drew up a plan similar to New Hampshire, which was subscribed to by all carriers and went into effect February 1, 1940. It was also administered by the Portland, Maine, office of the National Bureau and Mr. R. C. Shipley was made Manager of the Plan.

Problems of a similar nature had arisen in Connecticut, and to meet them the Industry introduced a Plan along the lines of the New Hampshire and Maine Plans and which became effective July 15, 1940. Its administration was placed under the National Bureau in New York.

The pressure for Plans continued to spread and in about a year plans similar to those already in effect were introduced in the following states:

Illinois	Effective	Oct. 1, 1940
Washington	"	Jan. 13, 1941
Vermont	"	Mar. 1, 1941
New Jersey	"	Apr. 1, 1941
Virginia	"	Mar. 15, 1941
New York	"	Nov 1, 1941

The Plan in Illinois became necessary as the result of the enactment of the Illinois Truck Act and it was made applicable to risks which became subject thereto or to the Illinois Financial Responsibility Law. While the Plan followed the pattern of the others which preceded it, there was a very substantial departure in that provision was made for its administration by a Governing Committee made up of representatives of the various types of carriers. That Committee also functioned as an Assignment Committee. Illinois thus became the first state where the plan made provision for a Governing Committee.

THE NEW YORK PLAN

New York, the largest insurance state in the United States, enacted an automobile financial responsibility law in 1941 and which went into effect on January 1, 1942. The Superintendent of Insurance requested the Industry to draw up a Plan to take care of risks not excluded from the law and who were unable to insure, and which would be in operation prior to the effective date of the new law. Throughout 1941 many conferences were held with the result that a Plan was put into effect when all carriers had subscribed thereto which was November 1, 1941.

The New York Plan followed the same pattern as the New Hampshire Plan but with some important changes and also desirable additional provisions.

The experiences under the existing plans demonstrated the need for expanding the Eligibility Rules, and also clarifying them with respect to disabilities. The section on "Convictions" was revised as follows:

(a) Driving a motor vehicle while intoxicated or "under the influence."
(b) Failing to stop and report when involved in an accident.
(c) Homicide or assault arising out of the operation of a motor vehicle.
(d) Driving a motor vehicle at an excessive rate of speed where injury to person or damage to property actually results therefrom.
(e) Driving a motor vehicle in a reckless manner where injury to person or damage to property actually results therefrom.
(f) Operating during period of revocation or suspension of registration or license.
(g) Operating a motor vehicle without authority.
(h) Loaning operator's license to an unlicensed operator.
(i) The making of false statements in the license application or registration application as to name or address.
(j) Impersonating an applicant for license or registration, or procuring a license or registration through an impersonation whether for himself or another.
(k) Any felony in the commission of which a motor vehicle is used.

Disabilities — The Disabilities Section was completely rewritten. As there will be subsequent references to that Section it is shown here in its entirety:

"No risk will be eligible if the applicant or anyone who normally or usually drives the automobile or anyone who drives it with knowledge of the applicant has a major mental or physical disability.

Partial or total deafness, or total deafness and dumbness does not constitute a major physical disability for the purposes of the plan, provided that special equipment (generally convex or full-view mirrors) is installed on vehicles which will be operated. It is further understood that such individuals' operators' licenses are endorsed to the effect that the operator may only drive a motor vehicle so equipped: such applicants should cite the special equipment in use and information respecting any restriction in operator's license when submitting application for coverage.

The loss of one eye does not constitute a major disability for the purpose of the Plan.

The loss or loss of use of part or all of an arm or leg, if the member is replaced by an artificial limb, or special equipment on the motor vehicle is provided, and the applicant passes a special driver's license test of the State, does not constitute a major physical disability for the purposes of the Plan: such applicants should cite any special equipment in use and information respecting any restriction in operator's license when submitting application for coverage.

Applicants subject to epilepsy or cardiac or similar conditions, are subject to investigation and required to submit satisfactory certificates from at least two qualified medical doctors, before assignment to a designated carrier or acceptance of such risks under the provisions of the Plan.

The loss or loss of use of all or part of two legs, two arms, or one arm and one leg, shall be considered a major physical disability for the purposes of the Plan: however, such risk will be given individual consideration."

Illegal Registrations — A section on illegal registrations was added to the effect that risks would not be in good faith entitled to insurance if the applicant had during the twelve months preceding the date of application intentionally registered a motor vehicle in the state illegally.

Distribution and Assignment of Risks — This section was changed to more clearly state the basis for assignment of vehicles not excluded from the Safety Responsibility Law. Provision was also made for adjusting premium writings of deviating carriers to the standard manual basis. The revised section was set up as follows:

"The Manager shall distribute the risks which are eligible for coverage under the plan among all carriers. The net direct automobile bodily injury premium writings of any carrier permitted approved deviations from standard manual rates in this State shall be adjusted to the standard manual basis by the Manager. The Manager shall then use the adjusted premium writings of carriers permitted approved deviations and the actual net direct premium writings of all other carriers, and shall distribute risks to all carrier subscribers to the plan by those adjusted premium writings, proportionate as far as practicable to such respective automobile bodily injury net direct premium writings, adjusted or actual, of all carrier-subscribers to this plan in the State. 'Net direct premium writings, adjusted or actual' as referred to in this paragraph shall exclude premiums on motor vehicles for the operation of which security is required to be furnished by Section 17 of the Vehicle and Traffic Law of the State of New York. In making such assignments due regard shall be given to the exclusions under reinsurance agreements, treaties or contracts filed in writing with the Manager by the individual subscribing carriers."

Re-certification of Operator's License — An entirely new section on re-certification of the applicant or principal operator of the vehicle was inserted in the articles on Eligibility. Re-certification procedures were contained in the Financial Responsibility Law, and the objective of writing them into the plan was to give the subscribers the privilege of requesting the Commissioner of Motor Vehicles to re-examine risks with unfavorable operating records as a result of which reasonable doubt existed as to whether such risks should continue to be licensed to operate a motor vehicle in the State. Risks which were not re-certified would no longer be eligible for assignment. However, carriers were obligated to issue policies to eligible risks before filing any re-certification requests with the Motor Vehicle Bureau.

Governing Committee — It was expected that the risk traffic through the plan would be much greater than in any plan then in effect. There would be more risks assigned and more risks cancelled. Numerous questions in connection with good faith would be raised as well as questions in connection with other provisions. The expenses of the plan would be fairly substantial and provision for their control and supervision would have to be made.

It was recognized that differences of opinion between the plan and parties in interest — carriers, applicants and producers of record — would arise and that there would have to be some facility created to consider individual cases and to render decisions on them.

The circumstances dictated the formation of a committee which would be responsible for the administration of the plan and do everything necessary to assure its operation on a sound and equitable basis.

Accordingly, provision was made for a Governing Committee to be composed of two stock carriers and two non-stock carriers and to be elected by the subscribers.

The Governing Committee was given power and authority with respect to the budgeting of expenses and the levying of assessments therefor, and to pay all the expenses of administering the plan. It was given power to select and appoint a Manager. It was required to meet as often as necessary to perform the general duties of administration of the plan.

As respects disputes which would inevitably ensue, any party in interest was given the right to appeal from a decision by the plan or from an action by a subscriber. The Governing Committee was deemed to be the proper agency to hear such appeals and, accordingly, was given that power. It was also deemed advisable to provide for appeals to the Superintendent of Insurance from decisions by the Governing Committee. That was done, and in such cases the decision of the Superintendent was to be final.

No carrier was required to write a policy for limits higher than \$5,000/\$10,000 bodily injury and \$5,000 property damage unless such limits were required by the New York Safety Responsibility Act and the assigned carrier was required to comply with the filing requirements applicable to the risk under such law. It should be noted that while there was no obligation on the part of carriers to make limits higher than those required by law available, there was nothing to prevent a carrier from doing so.

Expiration and Renewal of Risks — The plan was further expanded to include provisions with respect to expiration and renewals of assigned risks. Carriers would be required to renew eligible risks as assigned risks for two renewal periods, that is, the first and second renewals, and apply the proper additional surcharges. As respects third and subsequent renewals, carriers were expected to carry as normal business at the rates applicable to such business, risks which had a record of no conviction for a felony or for any of the offenses stated in the plan, or had not been involved in a bodily injury accident or two or more property damage accidents on which the carrier had made any payment or had set up any loss reserves and did not have a civil suit pending against them. In such cases the carrier would be given a premium credit under the plan for one year only after the three year period of assignment.

Risks which could not meet the above requirements would continue to be assigned until they were able to insure as normal business or decided not to carry automobile liability insurance any longer. Carriers were obligated to offer insurance so long as risks remained eligible but were privileged to appeal to the Governing Committee for relief from any renewal assignment after three years. These provisions were included to prevent "freezing" risks in the plan indefinitely.

Surcharges — There was also a substantive change in these provisions. While the 15% charge was retained it was made inapplicable to public automobile and long haul trucking risks. As respects such risks the additional charge was changed to 10%.

Calculation of Premium and Commission — Likewise a substantive change was made in provisions with respect to these rules. The commission on long haul trucking risks was fixed at 5% and at 10% on all other risks. However, reference to an allowance for counter-signature was eliminated and the following wording inserted:

"and 2½% of the total premium charged and collected from the applicant as field supervision allowance to the company to which the risk has been assigned or to its licensed agent."

The other provisions in the plan were practically the same as in the New Hampshire Plan.

PLANS IN ADDITIONAL STATES

Following the introduction of the New York Plan there was a slowing down in the spread of plans to other states, and in the next five years only four states put plans into effect — Michigan, Nebraska, North Dakota and Pennsylvania. This didn't mean that some risks ceased to have difficulty in securing insurance. Rather it was because the Industry was unwilling to put a plan into effect in any state where no financial responsibility law had been enacted. However, as rapidly as the individual states enacted such laws, the Industry cooperated fully and promptly made assigned risk plans available in the public interest.

The New York Plan was the model on which subsequent plans were based and though departures therefrom made in individual states recognized local conditions and reflected the views of the carriers in such states, the variations were generally limited to provisions with respect to eligibility and the distribution of risks. A few plans made provisions for investigation fees to be paid by applicants independently of other premiums.

While these plans were introduced coincident with financial responsibility laws, their availability was not restricted to risks subject to the laws. For one thing, the absence of insurance at the time of accident made an owner or operator subject to the law, and many risks insured in order to avoid becoming so subject. Therefore, it was agreed the plans should be available to risks under those conditions as it didn't seem logical to deny plan facilities to risks not subject to the law, and then assign the same risk after conviction for some offense as a result of which they were required to file evidence of financial responsibility for the future. In the opinion of many underwriters, risks wishing to insure in order to avoid the certification provisions of the law were better risks than those who had become subject to the law for one reason or another.

There is appended hereto an exhibit showing the dates on which an assigned risk plan in each state became effective and also the dates of the latest amendments.

GOOD FAITH

As the plans began to expand, and new problems and situations developed, there was a corresponding increase in the number of appeals by risks from actions by the plans and by the carriers with respect to rejections and cancellations. Applicants were being rejected and risks were cancelled by carriers because they were held not to be in good faith. The carriers were required to state their reasons in each case, and if an appeal was made, the Governing Committee would have to review the facts and determine whether the action by the carrier on the risk was justified. If the decision was in the affirmative, the carrier's action would be sustained. If not, the appeal by the applicant would be upheld and the same carrier required to reinstate coverage for the risk. Good faith as stated in the plan apart from the reference to specific conditions was not defined, and this lack of definition created uncertainty and difficulty. This was particularly true in the New York Plan which had the heaviest traffic of any plan in the Country.

The Governing Committees worked diligently and impartially in handling the cases, but frequently their decisions were unfavorably received by the subscribers and the risks when the Committee ruled against them. The number of appeals to the Insurance Departments increased as a result.

It had been the practice of the National Bureau and the Mutual Bureau to assist Managers of newly constituted plans as much as possible in connection with their administrative operations. They drafted a set of recommendations for the guidance of Managers consisting of a series of memoranda based on the experience and handling of Automobile Assigned Risk Plans in other states. These memoranda contained recommendations in connection with every phase of plan operations, including suggested forms to be used.

It was felt that the situation respecting good faith could be improved if an interpretation of the term were developed and circulated to all plans through that medium. Accordingly, an interpretation of good faith was prepared and submitted to the Governing Committee of the New York Plan who approved it. The interpretation was a long one but it did spell out the meaning of the term in some detail. It outlined the position of the Industry on the responsibilities of applicants which was simply that if the Industry in equity was making insurance available the applicant in similar equity should come into the assignment proceedings with clean hands. It is quoted in its entirety as a vital part of this record and to which further reference will be made later on in this paper.

INTERPRETATION OF "GOOD FAITH"

> "The plan cites certain specific conditions respecting convictions, illegal registration, and failure to pay automobile insurance premiums and definite statement is made in each of these sections that a risk which does not qualify according to such rules shall not be considered to be in good faith entitled to insurance under the plan. However, no attempt has been made to set forth in the plan each and every condition or situation which would classify the risk as being in good faith or not being in good faith entitled to insurance.
>
> It is deemed neither feasible nor desirable to attempt to define or attempt to enumerate all acts which constitute good faith or bad faith on the part of the applicant. The purpose of the plan, as of all assigned risk plans, is clearly set

forth in Section 1 of the plan. The intent and object of the adoption of the Voluntary Plan is to help only those applicants whose conduct, both past and present, indicates that they were or are denied insurance for reasons other than those attributed to absence of proper appreciation of their responsibilities to the State, and to their fellow men.

If it were the intent to interpret 'good faith' as meaning only the absence of enumerated offenses, it would not be possible to deny the application of the plan to the automobile owner or operator who, although not guilty of enumerated offenses, is engaged in a business definitely illegal and contrary to the expressed policy of the State. Certainly the plan is not intended to keep on the highways of the State persons whose use of the automobile is in the business of smuggling, illicit sale of merchandise, or promoting illegal gambling. Neither is it the intent of the plan to help the applicant who misrepresents the facts in order to mislead insurers and those charged with the administration of the plan. Perjury is a more heinous offense than the violation of a traffic law because it involves a much higher degree of moral turpitude. The same is true of illicit business.

The plan should be construed and administered as in the nature of equitable relief and the ordinary principles of equitable relief should apply. No one may seek equitable relief who has not done equity, and no one has a standing in equity who does not come into equity with clean hands.

The plan is not intended to aid the carrying on of illicit trades and practices and neither is it for the benefits of the persons who, by misrepresentation or perjury, conceal material facts. Rather it is to help those who, through no serious bad faith on their part, are inequitably deprived of insurance.

Instances of false statements that have arisen in the administration of the plan involve apparently deliberate omission of statements pertaining to prior convictions or suspension of licenses, false statements respecting ownership of motor vehicles, false statements respecting the registration of vehicles and the license of operators, and false statements respecting the occurrence of prior accidents. In many such instances the omission of such essential information required in the application form, or actual misrepresentation, apparently indicated that the risks were eligible for coverage under the plan. However, investigation by the designated carrier and reconciliation of developed facts with the records available from the Motor Vehicle Bureau of the State disclosed apparently deliberate attempts on the part of the applicant to obtain coverage through false statements. In these and all similar instances it is the opinion of the Committee that such applicants are not exercising that degree of good faith which entitles them to coverage under any voluntary automobile assigned risk plan."

The statement was of much assistance in most respects but it did operate to create new problems. Carriers resorted to it more and more and as a consequence the Governing Committees in the plans with the heaviest traffic were finding it increasingly difficult to handle appeals and to maintain consistency in the process.

DISTRIBUTION OF RISKS

This very important provision of the plans also created administrative problems which were frequently difficult to handle. The provision required the Manager, among other things, to distribute risks among the carriers "with due regard to the facilities of the carrier for servicing the risk". Many carriers interpreted that section as referring to safety engineering services. Carriers lacking such services felt the plan should not assign them any vehicles of the type generally subject to such services, such as public automobiles and commercial cars, particularly those used in trucking operations.

These provisions are mentioned here as examples of some of the major problems which the plans were experiencing and which pointed up the desirability of amending them in such a way as to improve the general situation.

TREND TO UNIFORMITY IN ASSIGNED RISK PLANS

The National Association of Insurance Commissioners has always had an active interest in assigned risk plans. As early as 1942, it created a Special Committee headed by Commissioner Blackall of Connecticut and made up of Insurance Department representatives of New York, New Hampshire, New Jersey and Illinois. The Governing Committee of the New York Plan together with the National and Mutual Bureaus was directed to consult and advise the Special Committee in its work so that it could make a report at the next meeting of the N.A.I.C.

The Special Committee specifically recommended that as soon as a satisfactory solution of the expiration and renewal procedures have been determined, recommendations be made that all plans be revised to include such provisions and at the same time all plans be amended and standardized as follows:

(a) All plans to be reprinted in manual size on white paper and distributed through the Central Distribution Division of the National Bureau so that they will automatically reach holders of state manual pages located in each respective state (this will insure a widespread distribution of the Plans amongst producers and avoid current criticisms that the existence of such plans are not generally known in the field.)

(b) Each plan to contain a supplementary page citing concise instructions for the proper completion of application forms and their submission, accompanied by proper documents, from producers' offices.

(c) All plans to be amended to provide for assignment of risks and distributions of administration expenses, based on carriers' net direct automobile bodily injury premiums written (adjusted by approved deviations in all rate-regulated states).

(d) Incorporation in all plans of a provision similar to that now existing in New York and Illinois Plans respecting optional re-certification of applicants under the plan at the option of the designated carrier.

It was also recommended that consideration be given to the elimination of the requirement that copies of the applicant's letters soliciting coverage be attached to the application. Further, there should be a study of the need for amending state laws to permit payment of commissions to producers whether or not they are brokers or agents of the designated carriers.

Finally, that all possible measures be taken to speed up investigations and the issuance of policies so that within 20 days from the date of application and provided payment is received by the carrier, coverage may be granted to applicants.

The matter of uniformity was also being discussed in Industry circles. Whenever a state enacted a Financial Responsibility Law and an assigned risk plan became necessary, the Industry used the latest plan available and changed it to reflect the needs in the new state plus any other changes the Industry felt were desirable. In 1944 in connection with the drafting of a revised plan in Virginia, the latest revision of the New York plan was used as the basis for discussion.

As an example of how changes were developed, there was a lengthy discussion of epileptics. Under the provisions of all then existing plans, risks with records of epilepsy were required to submit medical statements respecting their conditions from two qualified physicians. Invariably, the statements in such cases would indicate the condition existed, and that the risk continued to have seizures, whereupon the Governing Committee would rule the risk should not be assigned or that the carrier should be permitted to reject or cancel the risk. The Committee reasoned that rather than to require risks to go through that procedure with the same result the plan should not make insurance available to such risks. Accordingly, it was agreed that an applicant or anyone who usually drove the automobile subject to epilepsy was not entitled to insurance.

That action reflected the latest thinking on epilepsy, but there was no medium by which such action would be given to other plans. This was true of other provisions as well. Any new plans would be apt to reflect the latest changes, but existing plans were not changed unless some one recommended new amendments.

The work on the Virginia Plan was done by an Advisory Committee of the Industry consisting of R. C. Meade of the State Farm of

Bloomington, J. J. Hart of the Travelers, A. E. Spottke of the National Bureau, J. M. Muir of the Mutual Bureau and the writer. After the three days of the meeting and on the way back to New York, the group discussed the wide variations in existing plans and procedures, including interpretations of various provisions, and there was agreement that such variations created considerable uncertainty and confusion. The differences were conducive of results which were detrimental to the best interests of the carriers, and as a solution it was reasoned that much of the present difficulty could be eliminated if there was a greater degree of uniformity among all the plans. Mr. Meade was strongly of the opinion that greater uniformity was highly desirable and of substantial advantage for many reasons, and his suggestion was to create a committee for uniformity composed of carriers operating on a national basis and fully conversant with the undesirable risk problem which was just about the same from state to state. Such a committee would be able to reflect the thinking of all segments of the Industry and that being the case aggressive support for the committee recommendations in the several states would be expected to produce the desired uniformity. There were geographical frictions in the picture too, which a national committee might be able to overcome to a substantial degree.

As frequently as opportunity permitted, discussions of the subject were continued, and each time the participants became increasingly convinced of the desirability of a national advisory body. However, things like that move very slowly in our Industry, and take much time for development. Unfortunately, not long after the Virginia meetings, Mr. Meade passed away and was unable to see the degree of uniformity that was reached in the ensuing years. Mr. Hart of the Travelers has also since passed away. Those two gentlemen were truly stalwarts in their fields, and much of the present uniformity in plans is due to their constructive efforts.

Activity in the direction of uniformity began to manifest itself again formally in the National Association of Insurance Commissioners. The N.A.I.C. had created an Automobile Assigned Risk Plan Committee of which Commissioner Parkinson of Illinois was Chairman. At the June, 1945, meeting of the Association held in St. Paul, Commissioner Parkinson made the following statement in his report:

> "A committee from the Industry was authorized to recommend at the next meeting of the N.A.I.C. a plan for setting up a National Advisory Committee for the purpose of recommending steps that would achieve uniformity in the administration of Automobile Assigned Risk Plans in states where such plans are now in operation."

The record from then on contained no references to such a committee, but in July of 1946 Mr. William Leslie, Manager of the National Bureau, sent a memorandum to the Association of Casualty and Surety Executives suggesting the creation of a committee to serve as a clearing house and to facilitate cooperative action among carriers belonging to the following organizations:

Association of Casualty and Surety Executives
American Mutual Alliance
National Association of Independent Insurers

The Committee would be called the "Advisory Committee on Voluntary Automobile Assigned Risk Plans" and would have no official connection with any of the Assigned Risk Plans. Recommendations emanating from the Advisory Committee would be submitted to each plan and it was expected that representatives of the three named organizations serving on any such Governing Committees would strive to have the recommendations adopted. It was further recommended that each of the organizations name two representatives to make-up of the Committee.

The subject was discussed with the American Mutual Alliance and the National Association of Independent Insurers, both of which approved the suggestion. The National Association of Independent Insurers appointed Mr. H. E. Curry, Actuary of the State Farm Mutual Automobile Insurance Company, and Mr. C. B. Kenney, Vice President of the Allstate Insurance Company. The American Mutual Alliance appointed Mr. C. S. Lancaster, Assistant Secretary of the Liberty Mutual Insurance Comany and Mr. E. W. Day, Resident Secretary of the Lumbermens Mutual Casualty Company. The Association of Casualty and Surety Executives appointed as their representatives Mr. A. R. Goodale, Secretary of the Travelers Insurance Company and Mr. J. P. Crawford, Vice President of the Indemnity Company of North America.

Thus was created the National Advisory Committee on Automobile Assigned Risk Plans and it began to operate in 1946. At its first organizational meeting Mr. Richard C. Wagner of the Association of Casualty and Surety Executives was elected chairman, and he has functioned in that capacity since that time. The only changes in the Committee have been made by the N.A.I.I. who have now named the Government Employees Mutual Insurance Company as their representative in addition to the Allstate Insurance Company.

UNIFORM AUTOMOBILE ASSIGNED RISK PLAN

The first job the Committee took upon itself was to draft an assigned risk plan that would be agreeable to the various segments of the Industry and which would overcome many of the difficulties the Industry was having with existing plans. A definite objective was a plan that would be as clear as possible in every detail so that all parties in interest — the plan, the subscribers, the risks, the producers and the Insurance Departments — would be able to have a better understanding of the assignment procedures and thereby function to greater advantage.

It would not be possible to set down here a record of the many days and hours which were spent in discussing the various provisions.

However, it was a job that had to be done and the Committee was prepared to work as long as necessary to draft a plan that would be mutually satisfactory.

A major objective was to draft a clean cut eligibility section not necessarily to be tied entirely to good faith. The interpretation of good faith which has previously been outlined was used as a basis for the section and a comparison of it with the first Uniform Plan will indicate that everything except which might be termed "hearsay" has been included.

It was desirable that the section should be strong enough to stand by itself, and to clearly indicate what risks would be eligible for assignment. The section as developed included convictions for motor vehicle offenses and convictions for non-motor vehicle offenses. As respects the latter, factual information on convictions taken from police or court records was required. There was a specific provision against risks engaged in illegal operations. Conviction of a felony made an applicant ineligible. The then existing plans referred to convictions for a felony in the commission of which a motor vehicle was used. The final result was a section of greater strength and clarity.

As to good faith it was, of course, retained but restricted to two things. One was a certification by the applicant that within 60 days prior to the date of application he had attempted to obtain insurance and had been unable to secure it. Up until that time two or three letters of rejection of the risk signed by salaried company representatives of carriers were required, and the general opinion was that such a procedure was losing its effectiveness.

The other point was the application form. The interpretation of good faith contained a statement to the effect that anyone entering into equity should come in with clean hands. Therefore, it was reasoned the least that an applicant could do in return for the facilities which the plan would give him would be to give correct and truthful information about himself and those who would usually operate the automobile, including his operating and motor vehicle record as well as convictions for any non-motor vehicle offenses. All this was deemed to be material information, and so long as it was all reported in the application form the applicant was considered to be in good faith entitled to insurance provided he did not come within any of the other prohibitions or exclusions which were outlined in the plan. The completed section represented a very forward step and the benefit of uniformity in that respect proved to be very substantial.

The Distribution and Assignment of Risks section was truly the most difficult of all to construct. The efforts to reconcile the great variety of viewpoints and differences of opinion required almost endless discussion and infinite patience. The complexities of the situation seemed to defy solution, but finally things began to take shape to the point that a mutually satisfactory section emerged.

The end result was obtained by setting apart the types of risks which definitely required safety engineering and inspection services, such as buses and truckmen operating interstate and subject to I.C.C. regulations and truckmen operating beyond a radius of 150 miles from the point of domicile. Such risks were to be assigned to those carriers who at the time of subscription were writing or were willing to write such risks, and who had facilities for inspecting and servicing them. And in order to give carriers an incentive to accept such risks, as well as to achieve a broader distributional base, the carriers so writing were to be given a credit of $2.00 for each dollar of premium for such vehicles assigned.

As respects vehicles of all other classes, risks of less than five cars were to be assigned to all carriers.

Risks of more than five cars would be fleets and in the assignment of them due regard would be given to the ability of the carrier to serve the risk.

It was also recognized that certain hazardous classes could involve a concentration of exposure and in such cases, and also to avoid over-assignment, provision was made so that risks involving more than one vehicle of any class could be assigned to more than one carrier, with the further proviso that no subscriber should be required to accept an assignment of more than one unit of a given risk.

The Uniform Plan carried all of the usual provisions but with major changes in some of them.

Rates — As respects rates, the new plan clearly stated that all risks were subject to the rating systems of the designated carrier, but of greater importance was the increase in the additional charges, or surcharges as they are commonly called. The plan provided for a surcharge of 25% on all risks in recognition of the unfavorable loss ratios developed by assigned risks.

Period of Assignment — Another major change had to do with the period of assignment. It was limited to three years and no carrier would be required to carry any risk for longer than three years. The provisions with respect to third and subsequent renewals were eliminated for the reason it was not felt to be the function of an assigned risk plan to state what risks should be carried by subscribers as normal business. Any risk at the end of any policy period or during any policy period was free to negotiate its insurance in the normal market, but failing to do so would be assigned to one carrier for three years. If at the end of that time the risk was unable to secure insurance it could reapply to the plan as a new risk and if eligible be assigned to a different carrier. This was a substantive and welcome change as it is a matter of record that some plans were being administered to require carriers to afford insurance outside the plan indefinitely under certain conditions to risks because they had carried under the plan for three years.

The Uniform Plan continued to give the carriers the usual fifteen day period in which to conduct their investigations and give applicants notice of acceptance or rejection.

The Uniform Plan was presented in tentative outline to the National Association of Insurance Commissioners at the December, 1947, sessions in Miami Beach. The plan was well received although some Commissioners voiced objections to the higher surcharges. The National Advisory Committee was directed to continue their efforts and to make a further report at the sessions the following June.

By that time the plan was entirely completed and copies of it had been sent to all Commissioners in accordance with the directives given at the December meeting. In the process of drafting the plan, it was necessary to change the surcharge provisions to meet the objections which had been raised. The result was that the higher surcharge would be applicable to risks convicted of certain offenses and required to file evidence of financial responsibility, while all other risks would pay the usual surcharges.

The National Advisory Committee submitted their report to the Casualty and Surety Committee of the N.A.I.C., together with the completed plan. That report was as follows:

> "At the meeting of your Committee in December 1947, Mr. E. W. Day presented a tentative outline of the revised Assigned Risk Plan developed by the National Advisory Committee on Automobile Assigned Risk Plans. Following that meeting, the National Advisory Committee held several meetings to consider the views expressed at the meeting of your Committee and other matters relating to the problem. The final draft of the revised plan is attached hereto, together with a brief statement of the important changes therein. In accordance with its understanding as to the procedure to be followed, copies of the revised plan were sent on March 1, 1948 to the Commissioners of Insurance in all states having an Assigned Risk Plan in effect, with the suggestion that if approved it be made effective May 1, 1948. There has been some suggestion that the action taken by the National Advisory Committee in this respect should have been withheld until after the revised plan had again been considered by your Committee at this meeting. If that was the intention, the National Advisory Committee regrets its action and assures the Commissioners that its action was due solely to a misunderstanding of the procedure to be followed. In any event, its action has served to bring the plan to the attention of the Commissioners in advance of this meeting and thus permits a full discussion of the matter.
>
> As of the date of this report, the revised plan had been adopted and subscribed to in the following states: New York, Alabama, Iowa, Wyoming and South Carolina, the latter limited to risks required by law to carry insurance. It has also been distributed for subscription after having been approved, in some cases with some modifications, by the Insurance Commissioners in the following states: Colo-

rado, Idaho, Indiana, Michigan, Maryland, Minnesota, Mississippi, New Mexico, Oregon, Utah, Connecticut, New Jersey, Pennsylvania, Rhode Island, West Virginia, Delaware. In the remaining states where the plan has been submitted either no action has as yet been taken or the plan is under consideration.

Several members of the National Advisory Committee are present today and will endeavor to answer questions as to the plan. In view of this, we will not attempt to go into detail in this report as to the various provisions of the plan, but will merely attempt to comment on some of the provisions concerning which certain questions have been raised.

The most serious questions raised thus far are with respect to the manner of distribution of risks under Section 6 of the Plan. May we, at the outset, point out that the method therein provided, since it is the most controversial provision in the plan, received the most serious consideration of the National Advisory Committee. The method therein employed, in the judgment of the Committee, represents the most equitable compromise between the two conflicting viewpoints—the one being that all carriers should be obliged to accept all risks by assignment regardless of the class of risk—the other being that carriers not equipped to service certain risks, such as buses and long haul truckers, should not be obliged to accept these risks by assignment. In endeavoring to reconcile these conflicting viewpoints, it will be noted the Committee adopts the principle that all carriers should be required to accept assignment of any risk of less than five cars, other than (1) buses, (2) interstate truckmen subject to Interstate Commerce Commission regulations and (3) motor vehicles of truckmen operating beyond a radius of 150 miles. It is the belief of the Committee that risks of less than five cars, other than above enumerated, present no special problem that cannot be met by all carriers.

It will also be noted that Section 6 provides that with respect to the classes of risks just enumerated and risks of five or more public automobiles of all classes, they are to be assigned to those companies which are writing or are willing to write them, and in recognition of the extra hazardous nature of these risks for every dollar of premium for such risks assigned the carrier will be credited $2.00 of premium under the plan of distribution. Section 6 also provides that risks involving more than one car may be assigned to more than one subscriber when necessary and that a subscriber need not accept by assignment more than one unit of a given risk.

One of the criticisms of Section 6 is that since provision

sion should be made for those companies specializing in the writing of certain of these risks from having to accept risks which they do not ordinarily write, such as taxi-cabs and private passenger automobiles. It is submitted, however, that the justification for the one treatment is not applicable to the other. The present wording of this section gives recognition to the contention that some companies are not equipped to render the claim and engineering service necessary to the enumerated classes of risks. No such problem is involved in the case of private passenger cars. If the National Advisory Committee were to give recognition to this criticism, it would be equally valid to refine the method of distribution even finer so as to allow companies to decline the assignment of risks which under their rules of underwriting they do not write. For example, it would be just as logical to allow a company to decline the assignment of motorcycles if under its underwriting rules it does not write motorcycles. Any such treatment of the problem would, in the judgment of the Committee, cause a complete breakdown of the plan.

Another criticism is that Section 6 will not be workable because of the possibility in a given state that there might not be any company willing to write taxi-cab risks and, therefore, there would be no company to which to assign them. In answer to this, as heretofore pointed out, all companies are required to accept such risks of less than five cars. Insofar as risks involving more than five cars of this class are concerned, we believe it is likely that it will be found there are some companies writing this class or willing to write them. As evidence of this fact, in a large number of states in which the revised plan has been distributed for subscriptions, the subscriptions are being returned by a large majority of the companies indicating that they write, or are willing to accept by assignment, buses, long haul trucks, taxi-cabs and other public automobiles.

Another criticism is to the provision in Section 6 that permits a company to decline to accept more than one vehicle of any particular risk. Presumably, it is felt that this provision will cause difficulty, particularly with respect to Interstate Commerce Commission filings. It is submitted, however, that this provision merely follows the practice adopted in the operation of many of the existing plans, and according to our best advices has not caused any difficulty in administering. In instances where the risk is split up among more than one carrier, the carriers may make suitable arrangements between themselves for the handling of the risk and in some cases it is believed a single carrier will prefer to accept the assignment of the entire risk.

It has further been contended that the test under Section 6 as to whether a carrier should accept the enumerated classes of risks, should be whether they have the facilities to render the necessary service required on such risks rather than whether they are writing this class of risks. It is submitted, however, that such a method would involve serious administrative difficulties, such as the setting up of standards to determine whether a carrier is so equipped and the application of these standards by the Manager of the plan. It seems to the Advisory Committee that the best evidence as to whether a carrier is so equipped is the fact that it is writing the class of risk.

There has been criticism of some other provisions in the plan, but they have been of a relatively minor nature and in order to keep this report within the bounds of brevity, comment on same will be omitted. Except as herein indicated, by and large, no serious objections to the revised plan have come to the Advisory Committee's attention, and we believe there has been general approval of many of the changes, such as the elimination of the letters of declination, the requirement of a fee to accompany the application for assignment, the method of handling the risk after the three year assignment period has expired, the waiver of the 15 day provision for accepting a risk in the case of public automobiles and long haul trucking risks where prior to the application to the plan they had been insured in a carrier which had become insolvent, and the increase in surcharge to certain risks involved in accidents, convictions, or financial responsibility law filing requirements.

Mention should be made, however, of one further point, namely, the provision in Section 16 which reads, "If a carrier is assigned a risk in a class for which he has no rates on file, a carrier may file or promulgate a reasonable rate for such risk or class subject to the provisions of the law of the State." The Committee's attention has been called to the fact that some companies having no filings or rates for a particular class of risk have been informed that they would not be permitted to make individual filings but would have to file class rates. In view of the fact that the revised plan contemplates that carriers be required to accept risks of less than five cars, although they may not write the particular class of risks assigned and, therefore, have no rate filings for them, it is respectfully submitted that the individual filings of such companies be accepted.

In conclusion, may we say that no claim to perfection is made as to the revised plan. The Advisory Committee, however, believes it is a substantial improvement over the plans now in existence and earnestly recommends its favorable consideration."

ORIGINAL UNIFORM AUTOMOBILE ASSIGNED RISK PLAN

The Plan submitted with the foregoing report was set up as follows:

THIS PLAN IS A VOLUNTARY AGREEMENT FOR GRANTING AUTOMOBILE BODILY INJURY AND PROPERTY DAMAGE LIABILITY INSURANCE TO RISKS UNABLE TO SECURE IT FOR THEMSELVES

Sec. 1. Purposes of Plan

The purposes of the Plan are:

(a) To make automobile bodily injury and property damage liability insurance available subject to the conditions hereinafter stated.

(b) To establish a procedure for the equitable distribution of risks assigned to insurance companies.

Sec. 2. Effective Date

The Plan shall become effective when all carriers writing direct automobile bodily injury liability insurance in the State have subscribed thereto.

Sec. 3. Non-Residents

The Plan shall be available to non-residents of the State only with respect to automobiles registered in the State.

Sec. 4. Administration

The Plan shall be administered by a Governing Committee and a Manager. The Governing Committee (hereinafter referred to as "The Committee") shall consist of five subscribers, one from each of the following classes of insurers:

National Bureau of Casualty Underwriters
Mutual Casualty Insurance Rating Bureau
National Association of Independent Insurers
All other stock insurers
All other non-stock insurers

Annually, on a date fixed by the Committee, each respective group of insurers heretofore described shall elect its representative to the Committee to serve a period of one year or until a successor is elected. Twenty days notice of such a meeting shall be given in writing to all subscribers to the Plan. A majority of the subscribers shall constitute a quorum and voting by proxy shall be permitted.

Sec. 5. Duties of Governing Committee

The Committee shall meet as often as may be required to perform the general duties of administration of the Plan. Three members of the Committee shall constitute a quorum.

The Committee shall be empowered to appoint a Manager, budget expenses, levy assessments, disburse funds and perform all duties essential to the proper administration of the Plan.

The Committee shall furnish to all subscribers to the Plan, a written report of operations annually in such form and detail as the Committee may determine.

Sec. 6. Distribution and Assignment of Risks

The Manager shall distribute, on the basis of premium, the risks which are eligible for coverage under the Plan as far as practicable, to insurers in proportion to their respective net direct automobile bodily injury premium writings with due regard to exclusions under reinsurance agreements, treaties or contracts filed in writing with the Manager.

(a) Risks of less than five cars of all classes other than (1) buses, (2) interstate truckmen subject to Interstate Commerce Commission regulation and (3) motor vehicles of truckmen operating beyond a radius of 150 miles from the limits of the city or town of principal garaging, shall be assigned to all carriers.

(b) Risks involving (1) buses, (2) interstate truckmen subject to Interstate Commerce Commission regulation, (3) motor vehicles of truckmen operating beyond a radius of 150 miles from the limits of the city or town of principal garaging, and (4) risks of five or more public automobiles of all types, shall be assigned to those companies which are writing, or are willing to write, such risks at the time of subscription to this plan, with due notice to the manager to that effect. Assignment of these risks shall be made with due regard to the state insurance licenses held by the company.

(c) As respects all public automobiles, and truckmen described in (2) and (3) of paragraph (b) above, for every dollar of premium for such vehicles assigned, the company shall be credited $2.00 of premium under the plan of distribution.

(d) Risks involving more than one car of any class may be assigned to more than one subscriber when necessary. However, a subscriber shall not be required to accept an assignment of more than one unit of a given risk.

For assignment of risks during the 12 months beginning July 1 of each year the Manager shall use the net direct automobile bodily injury premiums in the State for the calendar year ending December 31 immediately preceding. Net direct premium writings shall mean gross direct premiums including policy and membership fees less return premiums and premiums on policies not taken — without including reinsurance assumed and without deducting reinsurance ceded.

Sec. 7. Cost of Administration

Each subscriber to the Plan shall pay a minimum annual fee of $5.00 and all expenses incurred in excess of the minimum fees shall be apportioned to all subscribers in such proportion as their net direct automobile bodily injury premium writings in the State bears to the total of such premium writings in the State of all subscribers during the calendar year.

Sec. 8. Convictions

The term "conviction" wherever used in this plan shall be deemed to include a forfeiture of bail.

Sec. 9. Eligibility

As a prerequisite to consideration for assignment under the Plan, an applicant must certify, in the prescribed application form, that he has attempted, within 60 days prior to the date of application, to obtain automobile bodily injury and property damage liability insurance in the State and that he has been unable to obtain such insurance.

An applicant so certifying shall be considered for assignment upon making application in good faith to the Plan. An applicant shall be considered in good faith if he reports all information of a material nature, and does not willfully make incorrect or misleading statements, in the prescribed application form, or does not come within any of the prohibitions or exclusions listed below.

A risk shall not be entitled to insurance nor shall any subscriber be required to afford or continue insurance under the following circumstances:

(A) If the applicant is engaged in an illegal enterprise, or has been convicted of any felony during the immediately preceding thirty-six months or habitually disregards local or state laws as evidenced by two or more non-motor vehicle convictions during the immediately preceding thirty-six months.

(B) When during the immediately preceding thirty-six months the applicant or any one who usually drives the automobile has been convicted or forfeited bail more than once for any one, or once each for two or more of the following offenses.

1. Driving a motor vehicle while under the influence of intoxicating liquor or narcotic drugs.
2. Failing to stop and report when involved in an accident.
3. Homicide or assault arising out of the operation of a motor vehicle.
4. Driving a motor vehicle at an excessive rate of speed where injury to person or damage to property results therefrom.

5. Driving a motor vehicle in a reckless manner where injury to person or damage to property results therefrom.
6. Operating during period of revocation or suspension of registration or license.
7. Operating a motor vehicle without state or owner's authority.
8. Loaning operator's license to an unlicensed operator.
9. The making of false statements in the application for license or registration.
10. Impersonating an applicant for license or registration, or procuring a license or registration through impersonation whether for himself or another.

(C) When the applicant or anyone who usually drives the automobile has intentionally registered a motor vehicle in the State illegally during the immediately preceding twelve months.

(D) When the applicant or anyone who usually drives the automobile has failed to meet all obligations to pay automobile bodily injury and property damage liability insurance premiums contracted during the immediately preceding twelve months.

(E) If the applicant or anyone who usually drives the automobile is subject to epilepsy.

The carrier to which a risk is assigned shall not be required to afford insurance if the condition of the applicant's automobile is such as to endanger public safety, except that the carrier shall afford insurance provided the applicant makes such repairs to his automobile as may reasonably be required.

Risks with physical disabilities involving heart ailments or mental or nerve illnesses shall be subject to investigation and shall submit for consideration of the Committee satisfactory certificates from at least two qualified doctors giving their diagnosis of such disabilities or their opinions with regard to the likelihood of such disabilities interfering with the risk's safe operation of an automobile.

Sec. 10. Extent of Coverage

No subscriber shall be required to write a policy for limits in excess of the minimum limits required by law. If no such limits are applicable no subscriber shall be required to write a policy for limits in excess of basic limits of $5,000/$10,000 bodily injury and $5,000 property damage.

The subscriber to which the risk is assigned shall make such filings of policies and certificates as may be required by law.

Sec. 11. Application for Assignment

The application for insurance under the Plan must be submitted to the Manager on a prescribed form in duplicate accompanied by an investigation fee of $5.00 per car subject to a maximum of $50. per risk. Checks or money orders shall be made payable to the Automobile Assigned Risk Plan. The investigation fee shall be credited against the premium if the risk is assigned and accepted and the applicant pays the balance of the premium in accordance with the terms of the Plan. If the applicant fails to pay the balance of the premium, the fee is not returnable. If the risk is ineligible for assignment, the fee shall be returnable.

Sec. 12. Designation of Carrier

Upon receipt of the application for insurance properly completed, the Manager shall designate a carrier to which the risk shall be assigned and shall so advise the applicant and the producer of record. The Manager shall forward to the designated carrier the original copy of the application form and the investigation fee.

Sec. 13. Three Year Assignment Period

A risk shall not be assigned to a designated carrier for a period in excess of 3 consecutive years. If a risk is unable to obtain insurance for itself at the end of the 3 year period, reapplication for insurance may be made to the Plan. Such reapplication shall be considered as a new application.

Sec. 14. Carrier's Notice to Applicant

(A) ORIGINAL POLICY — Within 15 days after receipt of notice of designation from the Manager, the designated carrier shall notify the applicant that

- (a) A policy will be issued provided the premium stipulated by such carrier is received within 15 days or within such further reasonable period as the carrier may agree to, such policy to become effective 12:01 A.M. on the day following the day on which such premium is received by the carrier, or
- (b) A policy will not be issued for the reason that the applicant is not entitled to insurance under the Plan.

Where notice of designation from the Manager involves a public automobile or truckmen risk, required by law to furnish evidence of insurance as a prerequisite for operating, which risk immediately prior to its application to the Plan had been insured in a carrier whose authority to do business has been terminated because of insolvency, the designated carrier, notwithstanding other provisions of this section, shall immediately give notice to the applicant that a policy will be issued provided the premium stipulated by such carrier is received within 15 days or within such further reasonable period and upon such terms as the carrier may agree to, such policy to become effective 12:01 a.m. on the day following the day on which such premium is received by the carrier, or that a policy will not be issued for the reason that the applicant is not entitled to insurance under the Plan.

A copy of each notice of acceptance or rejection of an assignment shall be furnished the producer of record. In the event the carrier rejects the assignment the reason supporting such action together with copy of said notice shall be filed with the Superintendent of Insurance of the State and the Manager.

If the Governing Committee finds that any carrier, without good cause, is not complying with the provisions of this Section, it shall notify the Superintendent of Insurance.

(B) FIRST AND SECOND RENEWAL POLICIES — At least 45 days prior to the inception date of the first and second renewal policies the designated carrier shall notify the applicant that

(a) A renewal policy will be issued provided the renewal premium stipulated by such carrier is received at least 15 days prior to the inception date of such policy, or

(b) A renewal policy will not be issued for the reason that the applicant is not entitled to insurance under the Plan.

A copy of such notice shall be filed with the producer of record. In the event the carrier will not issue a renewal policy the reason supporting such action together with copy of said notice shall be filed with the Superintendent of Insurance of the State and the Manager.

(C) *THIRD RENEWAL* — At least 45 days prior to the expiration date of the second renewal policy the carrier shall notify the risk that the period of assignment under the Plan will terminate on said expiration date.

A copy of such notice shall be sent to the producer of record.

Sec. 15. Carrier's Notice to Manager

Upon issuance of the original policy and the first and second renewal policies the designated carrier shall file with the Manager the policy number, the effective date and expiration date of the policy, and the amount of premium for which the policy was written. In the event changes in such policies involve additional or return premium, the carrier shall file with the Manager the amount of such premium.

If the applicant fails to pay the premium stipulated by the carrier, thereby refusing to accept coverage, the carrier shall so notify the Manager with copy to the producer of record.

Sec. 16. Rates

All risks assigned under the Plan shall be subject to the rules, rates, minimum premiums and classifications in force, and to the rating plans applicable thereto, in use by the designated carrier, subject to the following additional charges:

1. An additional charge of 10% for public passenger carrying and long haul trucking risks and 15% for all others, for all risks which do not come within (2) below.
2. An additional charge of 25% shall be made if the applicant or any one who usually drives the motor vehicle has during the three year period preceding the date of application
   (a) been involved as an operator or an owner in more than one motor vehicle accident resulting in injury to or death of any other person or damage to property of another.
   (b) been convicted of any of the violations specified in Paragraph B of Section 8 of this Plan.
   (c) been convicted more than once of any violation of the Motor Vehicle Code other than specified in Paragraph B of Section 8 of this Plan and other than convictions for parking.
   (d) been involved as an owner or operator in a motor vehicle accident as a result of which he has been required to furnish proof of financial responsibility under a Financial Responsibility Law, or
   (e) been required under a Financial Responsibility Law to furnish proof of financial responsibility for any reason other than having been involved in a motor vehicle accident.

If a carrier is assigned a risk in a class for which he has no rates on file, a carrier may file or promulgate a reasonable rate for such risk or class subject to the provisions of the law of the State.

Sec. 17. Surcharge

If a hazard of a risk is greater than that contemplated by the rate normally applicable under the Plan, the carrier may apply to the Superintendent of Insurance for an increase in such rate. Any increase in rate approved by the Superintendent shall be deemed to include the additional charges contained in Section 15.

Sec. 18. Cancellations

If after the issuance of a policy it develops that the insured is not or ceases to be eligible or in good faith entitled to insurance or has failed to comply with reasonable safety requirements, or has violated any of the terms or conditions upon the basis of which the insurance was issued, or if the insurance was obtained through fraud or misrepresentation, the carrier which issued the policy shall have the right to cancel the insurance in accordance with the conditions of the policy but in all such cases the reasons supporting such action shall be filed with the Manager and the Superintendent of Insurance of the State ten days prior to the effective date of cancellation. Such notice of cancellation shall contain or be accompanied by a statement that the insured has a right of appeal to the Governing Committee of the Plan.

If default occurs in the payment of premium upon any policy subject to interim adjustment, such policy shall automatically be subject to cancellation in accordance with the required notice as provided in the policy. A statement of the facts in support of such action shall be furnished the Manager and the Superintendent of Insurance of the State within ten days after the effective date of cancellation.

A copy of each such cancellation notice shall be furnished to the producer of record.

Sec. 19. Right of Appeal

An applicant denied insurance or an insured given notice of cancellation of insurance, under the Plan may appeal such action to the Committee. A subscriber to the Plan shall also have the right of appeal to the Committee.

The action of the Committee may be appealed to the Superintendent of Insurance of the State.

Sec. 20. Re-Eligibility

An applicant denied insurance under the Plan after appeal to the Committee shall not be eligible to reapply for assignment until 12 months after the date of the application. An assigned risk cancelled under the provisions of the Plan shall not be eligible to reapply for assignment until 12 months after effective date of cancellation.

Sec. 21. Commission and Field Supervision Allowances

Unless other arrangements have been made with the Superintendent of Insurance the commission and field supervision allowances under the Plan shall be allocated as follows:

(a) For long haul trucking risks and public passenger carrying vehicles, 5% of the policy premium for commission to a licensed producer designated by the insured, and 2½% of the policy premium for field supervision to the carrier or its licensed agent.

(b) For other risks, 10% of the policy premium for commission to a licensed producer designated by the insured, and 2½% of the policy premium for field supervision allowance to the carrier or to its licensed agent.

Sec. 22. Re-certification of Operator's License of Applicant or Principal Operator of the Motor Vehicle

If the designated carrier after investigation of the experience, physical or other conditions of any risk applying for coverage under this Plan, believes that reasonable doubt exists as to whether such applicant should continue to be licensed to operate a motor vehicle in this State, such carrier to whom the risk has been assigned may request the Motor Vehicle Commission to re-certify the ability of such applicant to continue to hold an operator's license; such applicant will not be eligible under this Plan until and unless the applicant is re-certified by the Motor Vehicle Commissioner as competent to hold and use an operator's license, either by a driving test or such other means as the Motor Vehicle Commissioner may require.

Designated insurers under this Plan must issue policies of insurance and give same to the applicant upon payment of the required premium, in accordance with the provisions of this Plan, as respects all eligible assigned risks who are required to file evidence of Financial Responsibility in order to retain or regain their operator's license or motor vehicle registration, before filing any request for re-certification of such applicant by the Motor Vehicle Commissioner.

Requests for re-certification must be made on a standard form agreed to as satisfactory by the Commissioner of Motor Vehicles. The form must be prepared in triplicate: the original sent to the Commissioner of Motor Vehicles, with duplicate copy sent to the Manager of the Plan.

The Casualty and Surety Committee received the report of the National Advisory Committee together with the completed Plan. In so doing, however, they indicated their feeling that it would not be proper for them to approve the Plan because they believed that approval was a matter for individual state action, and to facilitate the matter ordered copies of the Plan and the report of the National Advisory Committee be made available to all states through the records of the Association or from the Secretary.

The Uniform Plan was well received and within about a year became effective in about twenty states. Since its introduction and particularly with respect to the Eligibility and Distribution of Risk Provisions, it has produced a stability which apart from being remarkable is greatly to be desired.

There is little question about the success of the Uniform Plan which is now effective in some twenty-six states. As for the Advisory Committee it has striven to fulfill its objectives and live up to its expectations. It is purely an advisory committee, without power and without connection with any plan.

It receives suggestions from the Plans, Insurance Departments, Rating Organizations, and Carriers. It meets as often as necessary to consider any matters before it. Excerpts from its minutes are sent to Plan Managers, and whenever amendments are drawn up for the Uniform Plan they are sent to all plans for consideration together with explanatory memoranda of the changes. It has become the medium through which all discussions with the National Association of Insurance Commissioners of assigned risk plan matters are conducted.

Practically all plans are currently operating on the basis of referring matters of major importance having a bearing on plan operations to the National Advisory Committee with the view to maintaining or establishing uniformity. There is attached to this paper a chart analysis of the individual state plans as of April, 1955, compiled by the Association of Casualty and Surety Companies, and it indicates that the important provisions of the individual plans in most states are comparable to those of the Uniform Plan.

AMENDMENTS TO THE UNIFORM PLAN

Distribution and Assignment of Risks —(Sec. 6)— Amendments in this section were necesary to more adequately take care of the risk which was subject to a state or federal authority regulating motor carriers of persons or property. Those risks required filings by a single carrier, and by virtue of a filing on their behalf, the carrier became liable for every piece of equipment the risk operated. The risks involved were sometimes quite large and because of the nature of the filings they could not be distributed between more than one carrier unless re-insurance and servicing arrangements were entered into by the insuring carriers. Such arrangements were not practical for various reasons, with one of the most important being the matter of time, as it was not deemed feasible to hold up assignments pending the completion of such arrangements. As respects such risks, therefore, the Plan provided that they be assigned to one carrier.

As time went on carriers became more and more inclined to avail themselves of one provision of the section by not accepting more than one car on certain types of risks, and as a result, small risks were being assigned to and insured by several carriers. The practice increased to the point where it reached the attention of some Insurance Departments who raised objection on the ground that such action was not in the public interest and that insureds should not be compelled in certain cases to deal with a different carrier for each vehicle assigned.

The section was amended in 1950 to take care of both situations in the following manner:

> "The Manager shall distribute, on the basis of premium, the risks which are eligible for coverage under the Plan as far as practicable to insurers in proportion to their respective net direct automobile bodily injury premium writings with due regard to exclusions under reinsurance agreements, treaties or contracts filed in writing with the Manager.
>
> A. Risks of less than five cars of all classes other than (1) buses, (2) interstate truckmen subject to Interstate Commerce Commission regulation and (3) motor vehicles of truckmen operating beyond a radius of 150 miles from the limits of the city or town of principal garaging, shall be assigned to all carriers.
>
> B. Risks involving (1) buses, (2) interstate truckmen subject to Interstate Commerce Commission regulation, (3) motor vehicles of truckmen operating beyond a radius of 150 miles from the limits of the city or town of principal garaging, and (4) risks of five or more public automobiles of all types, shall be assigned to those companies which are writing, or are willing to write, such risks at the time of subscription to this plan, with due notice to the manager to that effect. Assignment of these risks shall be made with due regard to the state insurance licenses held by the company.
>
> C. As respects all public automobiles, and truckmen described in (2) and (3) of paragraph B above, for every dollar of premium for such vehicles assigned, the company shall be credited $2.00 of premium under the plan of distribution.
>
> D. No risk of less than five cars shall be assigned to more than one carrier.
>
> E. The assignment of risks of five or more cars shall be subject to the following:
>
> (1) If the risk be one other than those described in Paragraph B, due consideration shall be given to the ability of the respective carrier to serve the risk.
>
> (2) No risk shall be assigned to more than one carrier unless it is inequitable to assign it to one carrier by reason of the unusual hazard or unusual accident record of such risk.
>
> (3) If the unusual hazard or unusual accident record of a risk requires assignment thereof to more than one carrier, no carrier shall be obligated to

accept an assignment of more than four units of such risk.

(4) A risk subject to the requirements of a state or federal administrative authority regulating motor carriers of passengers or property shall be assigned to one carrier.

For assignment of risks during the 12 months beginning July 1 of each year the Manager shall use the net direct automobile bodily injury premiums in the State for the calendar year ending December 31 immediately preceding. Net direct premium writings shall mean gross direct premiums including policy and membership fees less return premiums and premiums on policies not taken—without including reinsurance assumed and without deducting reinsurance ceded."

Carrier's Notice to Applicant — (Sec. 14) — A major amendment in this section of the Uniform Plan became necessary and which represented a distinct departure from well established assigned risk customs. The Plan provision specified the time allowed the designated carrier to investigate the risk and to give it notice of its intentions. That had always been 15 days. There was constant complaint of the length of time required to complete assignments, and cases were cited where the delay amounted to two or three months. There was equally constant effort by the Plans to speed up such procedures (without any amendments) and while there was some improvement, it was not sufficient to overcome the situation.

A study of assignments indicated that for the most part notices of acceptance and premium requests by the carriers were being sent out within the required time, but that delays continued in a goodly number of instances. It was further indicated that a very small number of total assignments were rejected for cause. The Uniform Plan made eligibility determination a relatively simple matter and thus the Plans were able to reject many applicants upon receipt of the application for assignment. That served to reduce the number of risks not entitled to insurance, and it was assumed the remainder of such risks rejected for cause would be small. Considerable time was spent in exploring possible solutions, and the ultimate decision was that the time had come to eliminate the 15 day provision and insert an immediate coverage provision in its place. The revised section required a higher deposit premium—30% of the estimated premium for private passenger cars and higher amounts for other classes. The designated carrier, within two working days following receipt of the assignment was required to either issue a binder or policy and on sending one or the other to the applicant to state the balance of the premium due and request payment of that amount. As a protection to the carriers, there was a further provision that if the carrier did not receive the balance of the premium within 20 days or within the longer period as stated by the carrier, the carrier would be permitted to cancel the insurance and determine the short rate earned premium, subject to a minimum earned premium of $10.00 per car. The amendment operated to overcome the problem and carriers are currently operating under it without undue difficulty.

These new provisions were included in the following amendment which was introduced in the middle of 1950.

> "A. *Original Policy* — Upon receipt of the notice of designation and the premium or deposit from the Manager, the designated carrier shall, within two working days
>
> (1) issue a policy or a binder if all information necessary for the carrier to fix the proper rate is contained in the application form, such policy or binder to become effective 12:01 A.M. on the day following the second working day, or
>
> (2) bind the risk if all information necessary for the carrier to fix the proper rate is not contained in the application form, such binder to become effective 12:01 A.M. on the day following the second working day, or,
>
> (3) in the event such carrier does not have on file rates applicable to the risks assigned to it, make the necessary filing and immediately upon its becoming effective issue a policy or binder, such policy or binder to become effective 12:01 A.M. on the day following the second working day following the effective date of the filing.
>
> In the event the carrier finds the risk eligible for insurance under the rules of the Plan, notice shall be given the applicant to pay the balance of premium within fifteen (15) days or within such further reasonable period agreeable to the carrier, giving full credit for the deposit submitted with the application.
>
> The day on which the notice of designation and premium or deposit are received from the Manager shall be deemed the first working day, whatever may be the time of such receipt.
>
> No Saturday, Sunday, or legal holiday in the place of receipt, shall be deemed a working day.
>
> The producer of record shall be notified as to the disposition of the assignment in accordance with the foregoing Paragraphs (1)-(3).
>
> An assignment to any carrier contrary to the provisions of Section 6 shall be returned promptly to the Manager for reassignment."

THE "CLEAN RISK" PROBLEM

Another important amendment concerned the additional charges. The critical rate situation that manifested itself some time after World War II operated to tighten up the normal market and had the effect of forcing many risks wishing to insure into the assigned risk plans. Agency terminations and a general reluctance to appoint new agents during the period also forced many risks to seek the facilities of the plans. Many of the risks were without accident or conviction records and were not required to file certificates of proof under Financial Responsibility Laws. Such risks came to be known as "clean risks". There was mounting resistance to the practice of requiring those risks to pay the customary additional charges. This reached the point where the insistence of several Commissioners convinced the Industry some changes would have to be made. Accordingly, as respects those risks who had had no accidents of any kind and who had not been convicted of any motor vehicle offenses other than parking, or for a non-motor vehicle offense with a penalty of incarceration for five or more days, or fined $50.00 or more, the Plan was amended so that such risks would not be required to pay any additional charge, and producers would receive the stated percentage of the policy premium as commission. This represented a significant departure from the long established principle of the Industry with respect to payment of commissions on assigned risk business out of the premium dollar.

Sec. 16—Rates—was amended as follows to carry out the intent:

"All risks assigned under the Plan shall be subject to the rules, rates, minimum premiums and classifications in force, and to the rating plans applicable thereto, in use by the designated carrier, subject to the following:

A. An additional charge of 10% for public passenger carrying and long haul trucking risks and 15% for all others shall be made if the applicant or anyone who usually drives the motor vehicle has, during the thirty-six months immediately preceding the date of application for assignment, and in the case of renewal, during the thirty-six months immediately preceding the effective date of the renewal policy

 (1) been involved as an operator or owner in a motor vehicle accident resulting in injury to or death of any other person or damage to property of another, or

 (2) been convicted of any violation of the Motor Vehicle Code other than specified in Paragraph B of Section 9 of this Plan and other than a conviction for parking, or

 (3) been convicted of any non-motor vehicle offense and sentenced to imprisonment for five or more days, or fined $50.00 or more.

B. An additional charge of 25% shall be made if the applicant or anyone who usually drives the motor vehicle has during the thirty-six months immediately preceding the date of application for assignment, and in the case of renewal, during the thirty-six months immediately preceding the effective date of the renewal policy,

(1) been involved as an operator or an owner in more than one motor vehicle accident resulting in injury to or death of any other person or damage to property of another, or
(2) been convicted of any of the violations specified in Paragraph B of Section 9 of this Plan, or
(3) been convicted more than once of any violation of the Motor Vehicle Code other than specified in Paragraph B of Section 9 of this Plan and other than convictions for parking, or
(4) been involved as an owner or operator in a motor vehicle accident, or been convicted of an offense, or has had a judgment entered against him as a result of which he has been required to furnish proof of financial responsibility under a Financial Responsibility Law, or been required upon any other ground under a Financial Responsibility Law to furnish proof of financial responsibility.

If the carrier is assigned a risk in a class for which it has no rates on file, the carrier may file or promulgate a reasonable rate for such risk or class subject to the provisions of the law of the State."

This amendment was introduced in November, 1950.

OTHER AMENDMENTS

Subsequently amendments were made in other sections of the Plan. In June of 1952, and subsequently, several sections were amended, and rather than to spell out the amendments in detail here, a brief statement of the nature of the amendments follows:

Sec. 2 — Effective Date. This was revised to make clear that the Plan and amendments thereto became effective when all carriers had subscribed thereto.

Sec. 3 — Non-residents. Revised to take care of military personnel stationed in the state and owning vehicles registered in other states.

Sec. 6 — Revised to except school buses from "buses" in Paragraph A. Effect of change recognized general practice of carriers writing school buses freely, and that such writings would not require the acceptance of assignment of other types of buses. Paragraph B amended by removing "at the time of subscription" with respect to the writing or the willingness to write the types of risks specified, thus making it a continuing condition rather than a condition which existed at a definite time.

Sec. 9 — Eligibility. Revised to include anyone who usually drives the automobile.

Sec. 10 — Extent of Coverage. Revised to require subscribers to provide limits of liability adequate to comply with the minimum requirements of law; also to make the necessary filings of policies and certificates for the applicant, or for the spouse if eligible under the plan.

An optional paragraph was drafted for insertion in this section to provide that upon request of any applicant the assigned carrier shall afford limits adequate to comply with the provisions of the financial responsibility law of any state in which the motor vehicle will be operated. It was intended to be applicable only where the problem of exposure in states having higher limits had become acute.

Sec. 13 — Three Year Assignment Period. As respects military personnel, the assigned carrier was not required to renew if risk is located in another state where carrier is not licensed.

(Note: This section was further amended later to relieve the designated carrier of affording renewal coverage if the risk is stationed in another state and his automobile is not registered in the state where original assignment was made.)

Sec. 19 — Right of Appeal. This section amended to make clear that an appeal does not operate as a stay of cancellation and also to state the duty to be performed by a carrier when cancellation is not sustained by the Plan or by the Superintendent of Insurance. This section was also later revised to provide that carrier not obligated to issue policy on reinstatement unless premium for such policy is paid as required by Section 14—Carrier's Notice to Applicant.

There is attached the latest draft of the Uniform Plan as revised to May 7, 1954. A comparison of that material with the original plan and amendments as outlined herein will indicate the extent and manner in which the various sections have been revised.

CURRENT DEVELOPMENTS

Recently the National Advisory Committee has been giving consideration to further amendments in the Eligibility Section as well as the section dealing with the Distribution and Assignment of Risks.

As respects the Eligibility Section, it is being revised to recognize moving traffic violations, such as speeding, violating rules of the road, etc., and in connection therewith there has been no accident resulting in injury to persons or damage to property. As the Plan is presently drawn there is no limit to the number of such convictions an applicant may have and still be eligible, providing they are declared in the application. Therefore, after a careful review of the situation the section is to be amended by regarding three such convictions as one major conviction for the purposes of eligibility. An applicant having been convicted once for any of the offenses specified in Paragraph B of Section 9 and in addition having three convictions for moving violations will henceforth be ineligible for assignment. Also an applicant having a record of six convictions for moving violations only will likewise be ineligible. The section is also being revised to overcome difficulties resulting from convictions for more than one of the specified offenses arising out of one accident.

It is not a rarity for a risk to be convicted of several offenses in connection with a single accident, and investigations have disclosed that in a significant number of cases the risk has been the victim of circumstances.

As a solution it was decided in the public interest, that multiple convictions arising out of a single accident should be treated as one conviction for the purposes of the Plan. However, this procedure does not apply to convictions dealing with registration of a vehicle, owner or operator, and such convictions will be regarded separately as they are not related to accidents.

As respects the Distribution and Assignment of Risks Section, amendments of it have been drafted and recommended for the purpose of effecting a more equitable distribution of risks. It is based on the premise that assignments should be made in such a manner that each carrier will receive the same ratio of the total volume of assigned risk premiums which their premium writings bear to the total premium writings of all carriers in the state. That procedure will result in a more equitable distribution of assigned risk business, and produce a much higher degree of uniformity among plans as respects distribution and assignment procedures.

The Advisory Committee is also recommending in connection with the distribution section that each plan go on a fiscal year basis beginning July 1st of each year using the net direct automobile bodily injury premiums for the calendar year ending December 31 immediately preceding. This procedure will key the assignment quotas and procedures to one set of calendar year premiums and eliminate any distortions that have existed with respect to assignments on a calendar year basis with assignment quotas adjusted as of July 1 or some other date on the basis of premium writings for the immediately preceding calendar year then available.

UNIFORM RATES

In the last few years the matter of uniform rates for assigned risks has come in for considerable discussion. One reason advanced in their behalf is that many risks have followed the practice of discontinuing insurance made available to them through the plan when they were assigned to a Bureau carrier. Subsequently, they would reapply in the hope of being assigned to a carrier using lower rates, and repeat the process until they realized their objective. Another argument or rather example is where a risk denied insurance by carriers with higher rate levels applies to the plan and frequently becomes assigned to a carrier using lower rates. Another reason is the unfavorable loss experience on assigned risks.

The term "Uniform Rates" is something of a misnomer because in the popular interpretation it means the rates of the National Bureau. A "uniform rate and rating system" would be one which would be applicable to all carriers on assigned risks without regard to the rates they used on normal business.

However, in a few states some carriers using rates lower than those of the National Bureau as well as differing classification plans on their normal business have filed, and secured approval for, the rates and classifications of the National Bureau on assigned risks. In such filings the carriers have made no attempt to define "Assigned Risks". Thus in approving those filings the respective Insurance Departments have agreed that the use of the term is sufficiently definitive.

The National Advisory Committee has taken cognizance of the foregoing practice and has now developed an amendment to the Uniform Plan to provide that where a carrier is using rates on assigned risks which are higher than their rates applicable to normal business, their premium writings for assignment and assessment purposes shall be adjusted to the level of such higher rates. The studies also included the manner in which such adjustments may be made.

The Bureau carriers have a different problem. Their rate levels are higher than the non-bureau carriers. Their experience on assigned risks is also unfavorable, but no higher rate levels are available which they can endeavor to apply to assigned risks. Therefore, in order to achieve higher rates on assigned risks, changes in the present rating systems are necessary. Several possibilities suggest themselves, one of which is to increase the additional charges. Another is to get the assigned risk experience into state rate levels again following its elimination after the Uniform Plan with its higher additional charges was introduced. This is most desirable in any event.

Another possibility is to set up separate rates for assigned risks through the use of classifications or otherwise such as the application of a factor to manual rates, and to eliminate the additional charges in the process. Studies of the problem are being carried on currently by the National Bureau and the Mutual Bureau with the view of changing the rating system so as to produce more adequate rates for assigned risks.

GROWTH OF ASSIGNED RISK PLANS

All plans have grown steadily since their inception, and in the process have generally been sensitive to market conditions. In times when the carriers are underwriting their business very carefully, there is an immediate reflection in the increase in the number of applications to the plan. While automobile rates have risen steadily since World War II, the volume of assigned risk premium has increased and generally there has been a steady rise in the ratio of assigned risk premium volume to the total writings of all carriers. To illustrate the extent of the growth which has occurred there is shown some data from a few of the plans which is a representative sample of what has taken place. The data is made up of the calendar year writings of all carriers for the immediately preceding year, the number of new applications received and the ratio of assigned risk premium to the total writings for calendar years 1950 through 1955, except North Carolina which is through 1954.

NEW YORK

(1) Cal. Year	(2) Net Direct B. I. Premiums	(3) Number of New Appli-cations Rec.	(4) Total Assigned Risk Premiums Written†	(5) Ratio (4)/(2)
1950	147,850,572	16,739	2,983,001	.0202
1951	160,585,516	31,236	3,337,246	.0208
1952	198,566,775	89,553	6,752,185	.0340
1953	226,768,283	125,341	16,002,512	.0705
1954	274,824,936	124,534	36,313,133*	.1320*
1955	287,649,354	109,470	25,210,391	.0876

*These figures include a substantial number of 1953 assignments which were not included in the report for that year.

VIRGINIA

1950	23,792,636*	5,758	411,724	.0173
1951	26,010,242*	8,648	504,317	.0193
1952	28,708,925*	12,854	771,467	.0268
1953	31,554,711*	15,813	1,121,500	.0356
1954	37,841,793*	18,092	1,375,796	.0363
1955	39,732,145*	19,918	1,561,469	.0394

*Net Bodily Injury and Property Damage Premiums.

NORTH CAROLINA

1950	10,968,101	5,200	414,055	.0377
1951	11,007,049	7,775	519,829	.0472
1952	12,007,276	10,847	862,671	.0718
1953	14,743,504	18,841	1,234,313	.0837
1954	18,608,804	19,208	1,276,225	.0686

CALIFORNIA

1950–1951	95,043,067	10,603	966,092	.0102
1951–1952	99,568,652	27,774	1,574,983	.0158
1952–1953	114,156,037	48,586	3,810,228	.0330
1953–1954	155,297,818	45,618	4,402,645	.0283
1954–1955	179,766,744	40,120	4,055,579	.0226

†Bodily Injury and Property Damage.

It is encouraging to note in this connection that of the eligible renewal volume, on the average about 50% of it is actually renewed, and the remainder is apparently able to secure insurance in the normal market.

EXPERIENCE OF AUTOMOBILE ASSIGNED RISK PLANS

Ever since 1938 when the New Hampshire Plan became effective there has been a steady increase in the total volume of assigned risk premiums. This has been due in part to new plans coming into existence and the volume changes in the individual states, which with the exception of an occasional year or two has been consistently upward. Loss ratios on bodily injury have had an almost constant upward trend, while on property damage they have shown more fluctuation.

A summary of the total experience for all plans and all companies combined from policy year 1938 through 1953 is shown below. The data included in the consolidation was compiled under Official Calls issued by the Assigned Risk Plan Managers.

EXPERIENCE OF ALL AUTOMOBILE ASSIGNED RISK PLANS

SUMMARY—ALL COMPANIES COMBINED

		Bodily Injury			Property Damage		
	Policy Year	Earned Premium	Incurred Losses*	Loss Ratio	Earned Premium	Incurred Losses*	Loss Ratio
Total (Excl. Mass.)	1938	2,154	1,260	.585	894	566	.633
	1939	7,007	1,545	.220	2,874	2,031	.707
	1940	15,444	9,734	.630	5,739	1,838	.320
	1941	64,886	41,177	.635	22,665	13,110	.578
	1942	141,791	97,541	.688	49,435	27,541	.557
	1943	158,846	124,089	.781	66,246	42,141	.636
	1944	218,609	179,743	.822	89,123	58,001	.651
	1945	277,356	320,127	1.154	116,180	90,238	.777
	1946	592,933	439,883	.742	274,183	193,537	.706
	1947	2,305,165	1,411,294	.612	1,019,931	603,809	.592
	1948	4,985,231	3,191,032	.640	2,423,065	1,407,742	.581
	1949	6,142,051	4,486,844	.730	3,242,299	2,062,553	.636
	1950	5,892,077	5,023,822	.853	3,395,186	2,618,796	.774
	1951	7,872,785	7,505,029	.953	4,272,696	3,904,370	.914
	1952	17,855,200	17,183,723	.962	9,356,074	7,563,506	.808
	1953	30,617,604	30,130,506	.984	16,626,156	12,238,262	.736
	Total ...	77,149,139	70,147,349	.909	40,952,746	30,828,041	.753
Mass.**	1940-41 .	701,575	1,019,692	1.453	—	—	—
	1947-49 .	1,406,846	2,016,325	1.433	204,020	131,571	.645
	1950 .	608,280	1,261,325	2.074	123,182	147,385	1.196
	1951 .	755,393	1,392,068	1.843	254,130	305,116	1.201
	1952 .	1,340,765	2,391,604	1.784	528,960	419,123	.792
	1953 .	2,233,848	3,119,872	1.397	1,120,577	841,054	.751
	1954 .	2,645,719	3,201,964	1.210	1,004,271	794,021	.791
	Total ...	9,692,426	14,402,850	1.486	3,235,139	2,638,270	.816

*Including allocated claim adjustment expenses (excluding allocated claim adjustment expenses for Massachusetts Bodily Injury).

**Private passenger cars only for all policy years except 1940 and 1941. Bodily Injury data are not available for policy years 1942 through 1946. Property damage data are not available for policy years prior to 1948.

CONCLUSION

Assigned Risk Plans are a vital facility of the Automobile Liability Insurance business. Actually, they are indispensable. They make insurance facilities available to risks which are unable to insure and in that respect have functioned so effectively that in no state has there been any necessity for the enactment of legislation to take care of risks unable to insure. This is not to say the plans are perfect, but they are reasonable and in the public interest.

As time goes on new demands will be placed on them and so the process of revision will, of course, go on and on. These demands will be met by the Industry just as they have in the past — through the mutual and cooperative efforts of all segments of the business. Long ago the Industry recognized its obligations and responsibilities in this respect and the plans which have been developed and amended have clearly demonstrated that private insurance can, and will, continue to make automobile liability insurance available to deserving risks under reasonable plans and procedures.

EFFECTIVE DATES OF STATE PLANS AND DATES OF LATEST REVISIONS

State	*Effective Date*	*Latest Revision*
Alabama	May 17, 1948	July 1, 1955
Arizona	January 1, 1952	February 15, 1953
Arkansas	September 1, 1947	October 26, 1953
California	January 19, 1948	September 1, 1953
Colorado	July 1, 1948	January 15, 1955
Connecticut	July 15, 1940	September 15, 1954
Delaware	September 4, 1947	July 15, 1955
Dist. of Columbia	June 1, 1953	June 1, 1953
Florida	February 21, 1949	October 1, 1955
Georgia	July 1, 1951	January 1, 1954
Hawaii	January 1, 1950	March 1, 1955
Idaho	November 1, 1949	August 1, 1954
Illinois	October 1, 1940	November 15, 1951
Indiana	December 10, 1948	January 1, 1952
Iowa	June 15, 1948	September 1, 1955
Kansas	November 20, 1950	October 1, 1952
Kentucky	August 20, 1948	August 1, 1954
Louisiana	November 1, 1949	July 1, 1955
Maine	February 1, 1940	August 8, 1953
Maryland	July 1, 1949	January 1, 1955
Massachusetts	November 16, 1939	January 1, 1956
Michigan	August 12, 1943	February 1, 1955
Minnesota	January 1, 1949	December 1, 1954
Mississippi	July 19, 1948	July 1, 1955
Missouri	July 1, 1949	May 1, 1953
Montana	October 9, 1951	November 1, 1954
Nebraska	July 1, 1946	January 1, 1953
Nevada	February 15, 1950	September 15, 1954
New Hampshire	May 10, 1938	March 1, 1953
New Jersey	March 15, 1941	January 1, 1955

New Mexico	July 1, 1948	January 15, 1955
New York	November 1, 1941	January 1, 1955
North Carolina	July 1, 1947	April 1, 1955
North Dakota	June 1, 1945	February 1, 1955
Ohio	January 1, 1949	July 1, 1955
Oklahoma	January 1, 1950	October 20, 1952
Oregon	October 15, 1948	January 1, 1951
Pennsylvania	May 15, 1943	April 1, 1955
Rhode Island	July 28, 1947	November 1, 1954
South Carolina	June 1, 1952	September 1, 1955
South Dakota	July 1, 1949	March 1, 1955
Tennessee	June 1, 1949	July 1, 1955
Texas	January 1, 1952	November 1, 1954
Utah	February 15, 1949	November 1, 1954
Vermont	March 1, 1941	October 1, 1953
Virginia	July 1, 1952	April 1, 1955
Washington	January 13, 1941	July 25, 1953
West Virginia	July 31, 1947	April 1, 1955
Wisconsin	October 1, 1949	January 1, 1954
Wyoming	July 1, 1948	January 15, 1955

UNIFORM AUTOMOBILE ASSIGNED RISK PLAN (REVISED TO MAY 7, 1954)

THIS PLAN IS A VOLUNTARY AGREEMENT FOR GRANTING AUTOMOBILE BODILY INJURY AND PROPERTY DAMAGE LIABILITY INSURANCE TO RISKS UNABLE TO SECURE IT FOR THEMSELVES

Sec. 1. Purposes of Plan

The purposes of the Plan are:

A. to make automobile bodily injury and property damage liability insurance available subject to the conditions hereinafter stated, and

B. to establish a procedure for the equitable distribution of risks assigned to insurance companies.

Sec. 2. Effective Date

The Plan and amendments thereto shall become effective when all carriers writing direct automobile bodily injury liability insurance in the State have subscribed thereto.

Sec. 3. Non-Residents

The Plan shall be available to non-residents of the State only with respect to automobiles registered in the State, except that non-residents who are members of the United States military forces shall be eligible with respect to automobiles registered in other states provided such military non-residents are stationed in this State at the time application is made and are otherwise eligible for insurance under the Plan.

Sec. 4. Administration

The Plan shall be administered by a Governing Committee and a Manager. The Governing Committee (hereinafter referred to as "the Committee") shall consist of five subscribers, one from each of the following classes of insurers:

National Bureau of Casualty Underwriters
Mutual Insurance Rating Bureau
National Association of Independent Insurers
All other stock insurers
All other non-stock insurers

Annually on a date fixed by the Committee, each respective group of insurers heretofore described shall elect its representative to the Committee to serve for a period of one year or until a successor is elected. Twenty days notice of such meeting shall be given in writing to all subscribers to the Plan. A majority of the subscribers shall constitute a quorum and voting by proxy shall be permitted.

Sec. 5. Duties of Governing Committee

The Committee shall meet as often as may be required to perform the general duties of administration of the Plan. Three members of the Committee shall constitute a quorum.

The Committee shall be empowered to appoint a Manager, budget expenses, levy assessments, disburse funds and perform all duties essential to the proper administration of the Plan.

The Committee shall furnish to all subscribers to the Plan, a written report of operations annually in such form and detail as the Committee may determine.

Sec. 6. Distribution and Assignment of Risks

The Manager shall distribute, on the basis of premium, the risks which are eligible for coverage under the Plan as far as practicable to insurers in proportion to their respective net direct automobile bodily injury premium writings with due regard to exclusions under reinsurance agreements, treaties or contracts filed in writing with the Manager.

A. Risks of less than five cars of all classes, other than (1) buses, except school buses, (2) interstate truckmen subject to Interstate Commerce Commission regulation and (3) motor vehicles of truckmen operating beyond a radius of 150 miles from the limits of the city or town of principal garaging, shall be assigned to all carriers.

B. Risks involving (1) buses, except school buses, (2) interstate truckmen subject to Interstate Commerce Commission regulation, (3) motor vehicles of truckmen operating beyond a radius of 150 miles from the limits of the city or town of principal garaging, and (4) risks of five or more public automobiles of all types, shall be assigned to those companies which are writing, or are willing to write such risks, with due notice to the manager to that effect. Assignment of these risks shall be made with due regard to the state insurance licenses held by the company.

C. As respects all public automobiles, and truckmen described in (2) and (3) of paragraph B above, for every dollar of premium for such vehicles assigned, the company shall be credited $2.00 of premium under the plan of distribution.

D. No risk of less than five cars shall be assigned to more than one carrier.

E. The assignment of risks of five or more cars shall be subject to the following:

(1) If the risk be one other than those described in Paragraph B, due consideration shall be given to the ability of the respective carrier to serve the risk.

(2) No risk shall be assigned to more than one carrier unless it is inequitable to assign it to one carrier by reason of the unusual hazard or unusual accident record of such risk.

(3) If the unusual hazard or unusual accident record of a risk requires assignment thereof to more than one carrier, no carrier shall be obligated to accept an assignment of more than four units of such risk.

(4) A risk subject to the requirements of a state or federal administrative authority regulating motor carriers of passengers or property shall be assigned to one carrier.

For assignment of risks during the 12 months beginning July 1 of each year the Manager shall use the net direct automobile bodily injury premiums in the State for the calendar year ending December 31 immediately preceding. Net direct premium writings shall mean gross direct premiums including policy and membership fees less return premiums and premiums on policies not taken—without including reinsurance assumed and without deducting reinsurance ceded.

Sec. 7. Cost of Administration

Each subscriber to the Plan shall pay a minimum annual fee of $5.00 and all expenses incurred in excess of the minimum fees shall be apportioned to all subscribers in such proportion as their net direct automobile bodily injury premium writings in the State bears to the total of such premium writings in the State of all subscribers during the calendar year.

Sec. 8. Convictions

The term "conviction" wherever used in this plan shall be deemed to include a forfeiture of bail.

Sec. 9. Eligibility

As a prerequisite to consideration for assignment under the Plan, an applicant must certify, in the prescribed application form, that he has attempted, within 60 days prior to the date of application, to obtain automobile bodily injury and property damage liability insurance in the State and that he has been unable to obtain such insurance.

An applicant so certifying shall be considered for assignment upon making application in good faith to the Plan. An applicant shall be considered in good faith if he reports all information of a material nature, and does not willfully make incorrect or misleading statements, in the prescribed application form, or does not come within any of the prohibitions or exclusions listed below.

A risk shall not be entitled to insurance nor shall any subscriber be required to afford or continue insurance under the following circumstances:

A. if the applicant, or anyone who usually drives the automobile, is engaged in an illegal enterprise, or has been convicted of any felony or high misdemeanor during the immediately preceding thirty-six months or habitually disregards local or state laws as evidenced by two or more non-motor vehicle convictions during the immediately preceding thirty-six months, or

B. when during the immediately preceding thirty-six months the applicant or anyone who usually drives the automobile has been convicted or forfeited bail more than once for any one, or once each for two or more of the following offenses:

(1) driving a motor vehicle while under the influence of intoxicating liquor or narcotic drugs,

(2) failing to stop and report when involved in an accident,

(3) homicide or assault arising out of the operation of a motor vehicle,

(4) driving a motor vehicle at an excessive rate of speed where injury to person or damage to property results therefrom,

(5) driving a motor vehicle in a reckless manner where injury to person or damage to property results therefrom,

(6) operating during period of revocation or suspension of registration or license,

(7) operating a motor vehicle without state or owner's authority,

(8) loaning operator's license to an unlicensed operator,

(9) permitting an unlicensed person to drive,

(10) the making of false statements in the application for license or registration,

(11) impersonating an applicant for license or registration, or procuring a license or registration through impersonation whether for himself or another, or

C. when the applicant or anyone who usually drives the automobile has intentionally registered a motor vehicle in the State illegally during the immediately preceding twelve months, or

D. when the applicant or anyone who usually drives the automobile has failed to meet all obligations to pay automobile bodily injury and property damage liability insurance premiums contracted during the immediately preceding twelve months, or

E. if the applicant or anyone who usually drives the automobile is subject to epilepsy.

The carrier to which a risk is assigned shall not be required to afford insurance if the condition of the applicant's automobile is such as to endanger public safety, except that the carrier shall afford insurance provided the applicant makes such repairs to his automobile as may reasonably be required.

Risks with physical disabilities involving heart ailments or mental or nerve illnesses shall be subject to investigation and shall submit for consideration of the Committee satisfactory certificates from at least two qualified doctors giving their diagnoses of such disabilities or their opinions with regard to the likelihood of such disabilities interfering with the risk's safe operation of an automobile.

Sec. 10. Extent of Coverage

A. No subscriber shall be required to write a policy or binder for limits in excess of the basic limits of $5,000/$10,000 bodily injury and $5,000 property damage, provided, however, that where limits in excess of such basic limits are required by law the subscriber shall be required to write a policy or binder for limits adequate to comply with the minimum requirements of the law.

The subscriber to which the risk is assigned shall make such filings of policies and certificates for the applicant, or for the spouse if eligible under the plan, as may be required by law.

B. Notwithstanding Paragraph A, upon request of any applicant the assigned carrier shall provide limits adequate to comply with the provisions of the financial responsibility law of any state in which the motor vehicle will be operated.

(Note: Paragraph B is optional and is suggested for adoption only where the problem of exposure in states having higher limits becomes acute. If adopted, the first two paragraphs should be designated as "A".)

Sec. 11. Application for Assignment

The application for insurance under the Plan must be submitted to the Manager on a prescribed form in duplicate accompanied by a per car deposit of

A. (*) $—for private passenger motor vehicles and school buses,

B. (*) $—for buses and long haul truckmen subject to federal or state regulation,

C. (*) $—for other public motor vehicles, i.e., taxicabs, private liveries and public liveries, subject to federal or state regulation,

D. (*) $—for all other commercial or other public motor vehicles.

(*) The amount of the deposit per car shall be inserted in the plan by the Governing Committee in each state. It is suggested that each such deposit be not less than the generally charged rate applicable in the lowest rated territory for B.I. and P.D. combined. As an alternative to this method of fixing the amount of the deposit such amount may be fixed as a percentage of the annual premium in which event it is suggested that same be not less than 30% of the annual premium with a minimum of $10.00.

For all other classes refer to Manager for deposit to be charged.

Said deposit shall be either in cash or by check or money order payable to the ——— Automobile Assigned Risk Plan. If the risk is ineligible for assignment, the deposit shall be returned.

Sec. 12. Designation of Carrier

Upon receipt of the application for insurance properly completed and the deposit specified in Section 11, the Manager shall designate a carrier to which the risk shall be assigned and shall so advise the applicant and the producer of record. The Manager shall forward to the designated carrier the original copy of the application form and the deposit, same to be credited by the carrier against the policy premium. If for any reason the applicant refuses to accept the policy, the designated carrier shall retain the short rate earned premium for the period of coverage or the sum of $10.00 per car, whichever is greater, and return the balance to the applicant.

Sec. 13. Three Year Assignment Period

A risk shall not be assigned to a designated carier for a period in excess of 3 consecutive years. If a risk is unable to obtain insurance for itself at the end of the 3 year period, reapplication for insurance may be made to the Plan. Such reapplication shall be considered as a new application.

In the case of non-resident military personnel, as described under Section 3 of the Plan, the designated carrier shall not be required to renew if at the time of renewal the insured is stationed in another state and his automobile is not registered in ———*.

* (Insert state of plan).

Sec. 14. Carrier's Notice to Applicant

A. *Original Policy* — Upon receipt of the notice of designation and the premium or deposit from the Manager, the designated carrier shall, within two working days

(1) issue a policy or a binder if all information necessary for the carrier to fix the proper rate is contained in the application form, such policy or binder to become effective 12:01 A.M. on the day following the second working day, or

(2) bind the risk if all information necessary for the carrier to fix the proper rate is not contained in the application form, such binder to become effective 12:01 A.M. on the day following the second working day, or

(3) in the event such carrier does not have on file rates applicable to the risks assigned to it, make the necessary filing and immediately upon its becoming effective issue a policy or binder, such policy or binder to become effective 12:01 A.M. on the day following the second working day following the effective date of the filing.

In the event the carrier finds the risk eligible for insurance under the rules of the Plan, notice shall be given the applicant to pay the balance of premium within fifteen (15) days or within such further reasonable period agreeable to the carrier, giving full credit for the deposit submitted with the application.

The day on which the notice of designation and premium or deposit are received from the Manager shall be deemed the first working day, whatever may be the time of such receipt.

No Saturday, Sunday, or legal holiday in the place of receipt, shall be deemed a working day.

The producer of record shall be notified as to the disposition of the assignment in accordance with the foregoing Paragraphs (1) - (3).

An assignment to any carrier contrary to the provisions of Section 6 shall be returned promptly to the Manager for reassignment.

If the Governing Committee finds that any carrier without good cause, is not complying with the provisions of this Section, it shall notify the Superintendent of Insurance.

*Note: If under rating act of any state a binder may be issued even though rate is not on file, this Paragraph (3) may be omitted.

B. *First and Second Renewal Policies* — At least 45 days days prior to the inception date of the first and second renewal policies the designated carrier shall notify the applicant that

(1) a renewal policy will be issued provided the renewal premium stipulation by such carrier is received at least 15 days prior to the inception date of such policy, or

(2) a renewal policy will not be issued for the reason that the applicant is not entitled to insurance under the Plan.

A copy of such notice shall be filed with the producer of record. In the event the carrier will not issue a renewal policy the reason supporting such action together with copy of said notice shall be filed with the Superintendent of Insurance of the State and the Manager.

C. *Third Renewal*—At least 45 days prior to the expiration date of the second renewal policy the carrier shall notify the risk that the period of assignment under the Plan will terminate on said expiration date.

A copy of such notice shall be sent to the producer of record.

Sec. 15. Carrier's Notice to Manager

Upon issuance of the original policy and the first and second renewal policies the designated carrier shall file with the Manager the policy number, the effective date and expiration date of the policy, the amount of premium for which the policy was written and the percentage of additional charge made under Section 16. In the event changes in such policies involve additional or return premium, the carrier shall file with the Manager the amount of such premium.

If the applicant fails to pay the premium stipulated by the carrier, the carrier shall so notify the Manager with copy to the producer of record.

Sec. 16. Rates

All risks assigned under the Plan shall be subject to the rules, rates, minimum premiums and classifications in force, and to the rating plans applicable thereto, in use by the designated carrier, subject to the following:

A. An additional charge of 10% for public passenger carrying and long haul trucking risks and 15% for all others shall be made if the applicant or anyone who usually drives the motor vehicle has, during the thirty-six months immediately preceding the date of application for assignment, and in the case of renewal, during the thirty-six months immediately preceding the effective date of the renewal policy

(1) been involved as an operator or owner in a motor vehicle accident resulting in injury to or death of any other person or damage to property of another, or

(2) been convicted of any violation of the Motor Vehicle Code other than specified in Paragraph B of Section 9 of this Plan and other than a conviction for parking, or

(3) been convicted of any non-motor vehicle offense and sentenced to imprisonment for five or more days, or fined $50.00 or more.

B. An additional charge of 25% shall be made if the applicant or anyone who usually drives the motor vehicle has during the thirty-six months immediately preceding the date of application for assignment, and in the case of renewal, during the thirty-six months immediately preceding the effective date of the renewal policy

(1) been involved as an operator or an owner in more than one motor vehicle accident resulting in injury to or death of any other person or damage to property of another, or

(2) been convicted of any of the violations specified in Paragraph B of Section 9 of this Plan, or

(3) been convicted more than once of any violation of the Motor Vehicle Code other than specified in Paragraph B of Section 9 of this Plan and other than convictions for parking, or

(4) been involved as an owner or operator in a motor vehicle accident, or been convicted of an offense, or has had a judgment entered against him, as a result of which he has been required to furnish proof of financial responsibility under a Financial Responsibility Law, or been required upon any other ground under a Financial Responsibility Law to furnish proof of financial responsibility.

If the carrier is assigned a risk in a class for which it has no rates on file, the carrier may file or promulgate a reasonable rate for such risk or class subject to the provisions of the law of the State.

Sec. 17. Surcharge

If the hazard of a risk is greater than that contemplated by the rate normally applicable under the Plan, the carrier shall consult with the Governing Committee before submission to the Superintendent of Insurance for an increase in such rate. An increase in rate approved by the Superintendent shall be deemed to include the additional charges contained in Section 16.

Sec. 18. Cancellations

A. *Cancellations at Request of Insured*

If for any reason the insured requests cancellation, the carrier shall retain the short rate earned premium for the period of coverage or the sum of $10.00 per car, whichever is greater, and return the balance to the insured.

B. *Cancellation by Company*

A carrier which has issued a policy or binder under this Plan shall have the right to cancel the insurance by giving notice as required in the policy or binder if the insured

(1) is not or ceases to be eligible or in good faith entitled to insurance, or
(2) has failed to comply with reasonable safety requirements, or
(3) has violated any of the terms or conditions upon the basis of which the insurance was issued, or
(4) has obtained the insurance through fraud or misrepresentation, or
(5) has failed to pay any premiums due under the policy.

Each such cancellation shall be on a pro rata basis, subject to the minimum charge of $10.00 per car, and a copy of each such cancellation notice shall be furnished to the producer of record. A statement of facts in support of each such cancellation shall be furnished to the Manager and, except in the case of cancellation for nonpayment of premium, to the Superintendent of Insurance of the State, ten days prior to the effective date of cancellation.

Cancellation shall be effective on the date specified and coverage shall cease on such date.

Sec. 19. Right of Appeal

An applicant denied insurance or an insured given notice of cancellation of insurance, under the Plan may appeal such action to the Committee. Each notice of cancellation or denial of insurance shall contain or be accompanied by a statement that the insured or applicant has a right of appeal to the Governing Committee of the Plan. A subscriber to the Plan shall also have the right of appeal to the Committee.

The action of the Committee may be appealed to the Superintendent of Insurance of the State.

The Manager shall promptly notify the company, the insured or applicant, and the producer of record, of the disposition of the appeal, which notification in the case of refusal to sustain a cancellation shall include notice that upon payment of the deposit premium to the insurer a policy or binder will be issued.

An appeal shall not operate as a stay of cancellation, provided, however, that if either the Committee or the Superintendent of Insurance refuses to sustain the cancellation, the carrier which issued the policy or binder shall, within two working days after receipt of the deposit premium, provided such deposit premium is received within 30 days after determination of the appeal, issue a new policy or binder effective for a period of one year from the date of issuance of such new policy or binder. The balance of the premium shall be payable as provided in Section 14.

Sec. 20. Re-Eligibility

An applicant denied insurance under the Plan after appeal to the Committee shall not be eligible to reapply for assignment until 12 months after the date of the application. An assigned risk canceled under the provisions of the Plan shall not be eligible to reapply for assignment until 12 months after effective date of cancellation.

Sec. 21. Commission and Field Supervision Allowances

Unless other arrangements have been made with the Superintendent of Insurance the commission and field supervision allowances under the Plan shall be allocated as follows:

A. for long haul trucking risks and public passenger carrying vehicles, 5% of the policy premium for commission to a licensed producer designated by the insured, and 2½% of the policy premium for field supervision to the carrier or its licensed agent;

B. for other risks, 10% of the policy premium for commission to a licensed producer designated by the insured, and 2½% of the policy premium for field supervision allowance to the carrier or to its licensed agent.

Sec. 22. Re-Certification of Operator's License of Applicant or Principal Operator of the Motor Vehicle

If a designated carrier after investigation of the experience physical or other conditions of any risk applying for coverage under this Plan, believes that reasonable doubt exists as to whether the applicant or principal operator of the vehicle should continue to be licensed to operate a motor vehicle in this state, such carrier may request the Motor Vehicle Commission to recertify the ability of said person to continue to hold an operator's license. However, the designated carrier must issue a policy or binder in accordance with Section 14.

If the applicant is not re-certified by the Motor Vehicle Commissioner as competent to hold and use an operator's license, either by a driving test or such other means as the Motor Vehicle Commissioner may require, the applicant is not eligible under this Plan and the policy or binder should be canceled in accordance with Section 18 of the Plan.

Requests for re-certification must be made on a standard form, agreed to as satisfactory by the Commissioner of Motor Vehicles. The form must be prepared in triplicate, the original sent to the Commissioner of Motor Vehicles, with duplicate copy sent to the Manager of the Plan.

May 7, 1954

CHART ANALYSIS OF AUTOMOBILE ASSIGNED RISK PLANS

(Compiled by the Association of Casualty and Surety Companies)

State and reference to manager	Classes of risks: Double credit for certain risks	Classes of risks: Multiple unit risks: Acceptance of four units required	Classes of risks: Multiple unit risks: Risks subject to I.C.C. or state commission - acceptance of entire risk required	Classes of risks: Available to non-resident military personnel	Investigation fee or deposit premium? fxd. - fixed amount	When policy to be issued? (Number of days after designation) W - Working days	Surcharge: Risk without record	Surcharge: Risks with record: Single accident or minor conviction	Surcharge: Risks with record: Serious convictions; multiple accidents or minor convictions; or required to file proof	Period of assignment	Unusual features
Alabama (22)	Yes	Yes	Yes	Yes (u)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(u)	
Arizona (1)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(j)	
Arkansas (10)	No	No	No	No	Dep. prem. (fxd)	2 W	15%*	15%*	15%*	3 yrs.	
California (1)	Yes	(a)	(a)	Yes (j)	Invest. fee ($5)	(v)	None	(h)	(h)	3 yrs.(s)(j)	
Colorado (20)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(j)	
Connecticut (18)	Yes	Yes	Yes	Yes (j)	Dep. prem. (30%)	2 W	None	15%*	25%	3 yrs.(j)	
Delaware (18)	Yes	Yes	Yes	Yes (u)	Dep. prem. (30%)	2 W	None	15%*	25%	3 yrs.(u)	(r)
Dist. of Col. (13)	Yes	Yes	Yes	Yes (u)	Dep. prem. (30%)	2 W	None	15%*	25%	3 yrs.(u)	
Florida (3)	Yes	No	No	Yes (j)	Dep. prem. (fxd)	3 W	None	15%*	25%	3 yrs.(j)	
Georgia (22)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	15 (k)	15%*	15%*	25%	3 yrs.(j)	(k)
Hawaii (12)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	5 W	None	15% (e)	25%	3 yrs.(j)	
Idaho (4)	No	No prov.	No prov.	No	Dep. prem. (fxd)	2 W	None	15% (e)	25%	3 yrs.	
Illinois (21)	No	No	No	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(j)	
Indiana (23)	No	No prov.	No prov.	No	Invest. fee ($5)	15	None	15%*	25%	3 yrs.(s)	
Iowa (6)	Yes	No	No	No	Invest. fee ($5)	15	15%*	15%*	25%	3 yrs.	
Kansas (26)	Yes	Yes	Yes	Yes (u)	Invest. fee ($5)	15	None	15%*	25%	3 yrs.(u)	
Kentucky (16)	Yes	Yes	Yes	No	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.	
Louisiana (28)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	15%*	15%*	25%	3 yrs.(j)	
Maine (19)	Yes	Yes	Yes	Yes (u)	Dep. prem. (30%)	2 W	None	15%*	25%	3 yrs.(u)	
Maryland (13)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(j)	
Massachusetts (8)	(x)	(y)	(y)	Yes	Full premium	(z)	None	None	None	(z)	(g)
Michigan (2)	(b)	No prov.	No prov.	Yes (u)	Invest. fee ($3)	2 W	None	15%*	25%	3 yrs.(u)	
Minnesota (17)	Yes	Yes	Yes	Yes (u)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(q)(u)	
Mississippi (22)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(j)	
Missouri (10)	No	No prov.	No prov.	No	Dep. prem. (fxd)	15 (i)	15%*	15%*	25%	3 yrs.	
Montana (1)	Yes	Yes	Yes	Yes (u)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(u)	
Nebraska (6)	Yes	Yes	Yes	No	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.	
Nevada (1)	No	No prov.	No prov.	Yes (j)	Invest. fee ($5)	(v)	None	15%*	25% (g)	3 yrs.(j)	
New Hampshire (19)	Yes	Yes	Yes	Yes (u)	Dep. prem. (%)	2 W	None	15%*	25%	3 yrs.(u)	
New Jersey (18)	Yes	Yes	Yes	Yes (j)	Dep. prem. (30%)	2 W	None	15%*	25%	3 yrs.(j)	
New Mexico (20)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(j)	
New York (18)	Yes	Yes	Yes	Yes (j)	Dep. prem. (30%)	2 W	None	15%*	25%	3 yrs.(j)	
North Carolina (15)	Yes	Yes	No prov.	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	15%*	2 yrs.(c)(j)	(m)
North Dakota (17)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(q)(j)	
Ohio (14)	(b)	No prov.	No prov.	No	Invest. fee ($5)	2 W	None(d)	15% (d)	25%	3 yrs.	
Oklahoma (27)	Yes	No	No	Yes	Invest. fee ($5)	15	None*	15%*	25%*	3 yrs.	(o)
Oregon (25)	No	No prov.	No prov.	No	Invest. fee ($5)	5 W	None	15% (e)	25%	3 yrs.	
Pennsylvania (18)	Yes	Yes	Yes	Yes (j)	Dep. prem. (30%)	2 W	None	15%*	25%	3 yrs.(j)	
Rhode Island (18)	Yes	Yes	Yes	Yes (u)	Dep. prem. (30%	10	None	15%*	25%	3 yrs.(u)	
South Carolina (29)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(j)	
South Dakota (17)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(j)	
Tennessee (22)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(j)	
Texas (9)	Yes	No	No	Yes (j)	Annual prem.	2 W	None	15%*	25%	3 yrs.(u)	(aa)(cc)
Utah (24)	Yes	Yes	Yes	Yes (u)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(u)	
Vermont (19)	Yes	Yes	Yes	Yes (u)	Dep. prem. (30%)	2 W	None	15%*	25%	3 yrs.(u)	
Virginia (5)	Yes	Yes	Yes	No	Dep. prem. (50%)	2 W	15%*	15%*	15%*	3 yrs.	(p)
Washington (7)	No	No prov.	No prov.	Yes (j)	Invest. fee ($5)	(t)	None	15%*	25%	3 yrs.(j)	(bb)
West Virginia (18)	Yes	Yes	Yes	Yes (j)	Dep. prem. (30%)	2 W	None	15%*	25%	3 yrs.(j)	
Wisconsin (11)	Yes	(f)	(f)	Yes (j)	Dep. prem. (fxd)	3 W	None	15%*	25%	3 yrs.(j)	(g)
Wyoming (20)	Yes	Yes	Yes	Yes (j)	Dep. prem. (fxd)	2 W	None	15%*	25%	3 yrs.(j)	

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* 10% on public passenger and long-haul trucking risks.

(a) Entire risk may be assigned to one insurer.
(b) Credits vary depending on type of risk.
(c) Or period for which proof is required.
(d) 25% on public passenger vehicles, ambulances and long-haul trucking risks.
(e) 10% on public passenger vehicles.
(f) Risks involving more than one vehicle may not be assigned to more than one carrier.
(g) No provision for surcharge on risks required to file proof.
(h) No surcharge for accident record. 15% surcharge (10% for long-haul trucking) for risks with record of conviction or required to file proof.
(i) 2 working days on public auto and truckmen required to insure and on military personnel resident or having a car registered in the state.
(j) Nonresident military personnel not eligible for renewal after removal from state.
(k) Policy becomes effective on 15th day after receipt of notice of designation.
(m) Eligibility rules do not apply to risks required to file proof.
(n) Available only to risks required by state law or by regulation to carry insurance.
(o) Risk may be rejected only for misstatement in application.
(p) State also has statutory plan for risks rejected by voluntary plan.
(q) Up to 5 years on risks required to file proof.
(r) State also has statutory plan applicable to owners required to file proof.
(s) Insurer has option to continue on risk after 3 years.
(t) Within 3 working days on non-certified risks, and within 15 days on others, insurer shall notify applicant that policy will or will not be issued.
(u) Nonresident military personnel not eligible for renewal if then stationed in state where designated carrier not authorized.
(v) Carrier must notify applicant within 3 working days that policy will be issued upon payment of premium, or that policy will not be issued.
(w) Carriers are credited with insurance on youthful drivers voluntarily written.
(x) Ten credits for long-haul trucks and buses N.O.C.
(y) No limit on number of units.
(z) Plan operates in conjunction with compulsory law. Assignments based on system of credits. Plan commits company to coverage and collects premium. Assigned risks are subject to cancellation rules applicable to all risks.
(aa) Eligibility provisions differ substantially from Uniform Plan.
(bb) Certain motor carriers and certain other risks are excluded from Plan.
(cc) Available to nonresidents (other than military) only with respect to vehicles <u>required</u> to be registered in state.

MANAGERS

1. ARIZONA, CALIFORNIA, MONTANA, NEVADA: Thomas G. Aston, Jr., 114 Sansome St., San Francisco 4, California
2. MICHIGAN: A. S. Cowlin, 1207 Francis Palms Bldg., Detroit 1, Michigan
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18. CONNECTICUT, DELAWARE, NEW JERSEY, NEW YORK PENNSYLVANIA, RHODE ISLAND, WEST VIRGINIA: George J. Schepens, 100 William Street, New York 38, New York
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STATISTICS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS

BY

J. H. FINNEGAN

At the time the National Board of Fire Underwriters began collecting classified statistics, some 14 of the 48 States required reports directly from individual companies. There was no uniformity among these reports as some were required monthly, some annually and there was no standard report form. Reports on losses were always required and most States were interested in losses paid. But one called for losses incurred. Amounts at risk were most often reported but premiums written were sometimes necessary.

The National Board became interested in the reporting of statistics when the Superintendent of Insurance of New York asked in a circular issued May 20, 1912 for the classified record of companies' experience for New York State for the period 1900 to 1911. The request received immediate consideration and the matter was given further attention by the Insurance Commissioners at their 1913 convention. The National Board appointed an Actuarial Committee to consider the New York request and broadened the inquiry to include the question of a standard form for the reporting of fire losses as well as a standard classification of occupancies.

To handle the collection of these figures as well as to perform other functions, the Actuarial Bureau of the National Board was established in 1915. The gathering of statistics began immediately and one of the first lessons learned was that the original classification of some 584 occupancy classes was so refined that it produced figures of limited value. A revision of the classification reducing the number of divisions to 154 went into effect January 1, 1918. A further revision became effective January 1, 1925 when the number of classes became 156. Still another change was made January 1, 1928 when the number of classes was reduced to 28 and these were reduced to 26 classes in 1932.

The National Board began its new operation by providing classified fire data to 14 States. By 1920 the number had grown to 19 and for all 19 the compilations were for duly elected member and subscriber companies only. New York State was the first to name the National Board statistical agent for members and non-members as well. This occurred in 1922.

During the period 1915 to 1918 loss compilations prepared by the Actuarial Bureau were based on reports of individual fire and lightning losses supplied by member companies. These were and still are submitted on a standard form made out by the adjuster. Originally the forms were completed for payments of all sizes but those for small sized claims were eliminated until now they are, with some exceptions, supplied only when the payment is $100 or more. A 3 x 5 photostat of the top half of each completed form is supplied to the various state fire marshals who use the information in their fire prevention activities. The submission of these small photostats fulfills for member and subscriber companies the requirements by state fire marshals that details on individual fire loss payments be reported.

The adjuster's loss report also contains the cause of each fire and after having been coded, this, as well as certain other information, is transferred to punched cards. These are tabulated once each year and provide data on the relative importance of different causes. Certain state fire marshals require these data and a nationwide composite is published annually in the National Board Proceedings as part of the report of the Committee on Statistics and Origin of Fires.

From 1915 to 1953 the causes of fires were grouped according to a division which lost some of its usefulness with the passage of time and the introduction of new processes and hazards. The old grouping was revised in 1953 and a dual classification substituted instead. Each loss report now receives one code for the kind of spark or cause of ignition and a second code for the substance on which the spark fell or material ignited. No figures according to the new breakdown have as yet been published, but it is believed that much useful information not previously on hand will be available before long.

The cause of loss data published by the National Board are prepared under the direction of a Committee now called the Committee on Statistics and Origin of Losses, and as the annual report of this Committee also contains two other statistical series, they will be described at this point.

The first of the two series shows the total estimated fire losses by years since 1875. These annual totals are now based on insurance losses of member companies but the total of amounts reported are expanded to allow for unreported losses, for losses by non-member carriers and for losses suffered by uninsured property owners. In 1930 member companies began the submission of reports of monthly losses incurred. These are totaled each month and after similar expansion to allow for uninsured and unreported losses, etc., appear in the press. At the close of each year, the adjusted monthly losses are added with the total shown as part of the series of annual losses starting in 1875.

The annual reports of the Committee on Statistics and Origin of Losses for years since 1948 also contain figures on the number of alarms for fires. These are based on reports submitted by fire chiefs of United States cities, 2500 and over. After the figures reported by the various cities are combined, the totals are adjusted on the basis of population to allow for alarms in cities from which no reports are received. The alarm totals are classified first by size of city and then as among fires in buildings, outdoor equipment and grass or brush. It is important to note that the fire alarm series relates to insured and uninsured property alike and no adjustment such as is necessary for dollar loss totals need be made in this instance.

* * *

As indicated above the reports of individual losses have always been satisfactory as far as fulfilling the needs of the state fire marshals were concerned and also for supplying cause of loss information. Difficulties were encountered, however, when the individual loss payments for any given State were added and an attempt made to reconcile the totals with annual statement entries. The two seldom, if ever, agreed and to produce loss figures which could be reconciled with statement totals companies were required, starting with 1939, to submit, in addition to reports on individual losses, a summary tabulation of losses paid by occupancy class with a written reconciliation to annual statement totals.

Today individual loss reports are still received and copies are supplied to the fire marshals of 19 States. Summary tabulations of both premiums and losses by occupancy class are also submitted by companies according to the general plan established in 1939 and reconciliations to annual statement totals have been made time and again with little difficulty.

It is interesting to note that the original plan for the reporting of statistics called for a classification of losses and amounts at risk. It did not ask for premiums written. The laws of certain States required premiums written, however, and when finally put into operation, the National Board plan called for premiums written and amounts at risk as well as losses paid. As time went on the value of data on amounts at risk came to be questioned more and more. Companies found, for example, that the frequency with which endorsements were made to fire policies made it practically impossible to maintain accurate figures on amounts at risk and that the custom of writing term business created additional complications. The figures fell into disuse and were gradually dropped until the last State rescinded its requirement for them in 1942.

STANDARD CLASSIFICATION OF OCCUPANCY HAZARDS

As mentioned above the original classification contained 584 occupancy classes which were subsequently reduced to 154, then to 156, to 28 and finally to 26 in 1932. The 26-class breakdown was satisfactory at first but as time passed, it became apparent that many of the 26 classes were too broad and that a finer division of occupancies would be more valuable. The decision to develop a new classification was made almost simultaneously by both industry and the National Association of Insurance Commissioners and a two year period of study began. The industry revision expanded the 26-class breakdown to 100 fire classes which were subdivided according to one of six construction-protection divisions. This went into effect in January of 1946.

A revised version containing 115 classes approved by the National Association of Insurance Commissioners became effective January 1, 1947 and is still in use. These 115 classes are shown in an appendix. Being one of occupancy and without reference to ownership, the new

Standard Classification of Occupancy Hazards, as it is called, was not in all instances a simple subdivision of the 26-class breakdown which it replaced. There was some overlapping and to make it possible to continue the production of the old 26-class experience, 20 of the 115 classes were temporarily subdivided. In 1952 when five years of the 115 class data had accumulated the old 26-class breakdown was no longer of any use and a new edition of the Standard Classification, eliminating all reference to temporary codes, was published. Except for the dropping of the temporary codes, expansion of the index and rearrangement of descriptive material, the new edition is identical with the one it replaced.

As indicated above the statistics first collected by the National Board were for fire only. Premiums and losses for extended coverage and allied lines for years before 1947 were collected by the Allied Lines Association. With the adoption of the Standard Classification which specified classifications for such business, the National Board continued its compilation of fire experience and in addition began the collection of premiums and losses for extended coverage, wind and hail (except on growing crops), flood, rain, water damage, sprinkler leakage, explosion, earthquake and aircraft and vehicle property damage.

The following figures from Insurance by States show the direct premiums written for most of these coverages during the year 1954. The figures represent the direct writings of stock companies in the Continental United States:

Fire	$1,282,993,000
Extended Coverage	422,585,000
Tornado, Wind and Hail except Growing Crops	7,820,000
Sprinkler Leakage and Water Damage	9,061,000
Explosion	725,000
Earthquake	5,771,000

Following adoption by the National Association of Insurance Commissioners the Standard Classification was adopted individually by Alaska, Hawaii and Puerto Rico and all but a few States. The exceptions are West Virginia, which has adopted the extended coverage endorsement and the allied lines portions only; the District of Columbia which adopted neither the fire nor extended coverage portions but has adopted the section on allied lines; Wisconsin, which follows the Standard Classification but has added a number of additional special classes of its own; and Texas which uses a special set of subdivisions which cannot be converted. The Texas Insurance Checking Office places its own as well as Standard Classification codes on all dailies. This is necessary to fulfill Texas requirements and to permit member and subscriber companies to report their Texas business to the National Board on the same basis as used for other States.

The preceding paragraph mentions coding of Texas dailies and at this point it might be explained that with the adoption of the

Standard Classification the practice began of sending all dailies to a state stamping office for coding. The procedure was established to effect uniformity and with certain not too important exceptions all dailies are coded by a state bureau before companies receive them. With the code on each daily at the time of receipt, entry of the proper code on company records presents no problem. When a loss occurs and the daily examined, the same code is copied for use on all loss records and on reports submitted to the National Board.

STATISTICAL AGENT

The adoption of the Standard Classification in 1947 brought a substantial expansion in the statistical activities of the National Board, but the increased number of classes and the collection of figures for other than fire lines were not entirely responsible. The status of the National Board as statistical agent for subscriber and non-subscriber companies expanded as well.

Duly elected National Board members and Actuarial Bureau subscriber companies report all of their fire and allied lines business in all States, the District of Columbia, Alaska, Hawaii and Puerto Rico, and these figures comprise a large proportion of the premium volume reported to the National Board. Reports are also received from non-subscriber stock companies under designations which the National Board has accepted as statistical agent for all but a few States. As indicated earlier the National Board has been supplying fire experience to certain States for a number of years, but the formal designations as statistical agent for subscriber as well as non-subscriber companies increased markedly after the adoption of the Standard Classification in 1947. At present the National Board is statistical agent for the insurance departments of Alaska, Hawaii, Puerto Rico and of all States except Louisiana, Montana, California and Texas. In Colorado the designation applies to subscriber companies alone but in the other States the designations cover all stock companies which may report on either an optional or a mandatory basis. In West Virginia the designation covers extended coverage and allied lines but not fire. In the District of Columbia the designation is for allied lines alone.

STATISTICAL PLAN FOR EARNED PREMIUMS AND INCURRED LOSSES

After the adoption of the Standard Classification and the appointment of the National Board as statistical agent by various States, the desirability of classified experience reports on the earned and incurred basis in addition to written and paid experience was realized. The tremendous volume of detail cards used in the ordinary course of business in a fire company office as well as other practical considerations ruled out the possibility that companies might compute earned premiums by State, Major Peril and occupancy class and supply such figures directly to the Actuarial Bureau. Instead the Statistical Plan for Earned Premiums and Incurred Losses was devised and adopted effective January 1, 1949 for fire and extended coverage but not for other allied lines. At the outset only duly elected subscribers were required to report on the new basis but since 1949 seven States and Puerto Rico have made it mandatory for all stock companies.

Under this Statistical Plan for Earned Premiums and Incurred Losses, the previous pattern of reporting was continued with certain additional requirements which in no way affected the continuation of the written-paid statistical series begun in 1947.

The first requirement of the new Statistical Plan was that premiums formerly reported by State, Major Peril and Subclass would, starting with January 1, 1949, be reported with an additional breakdown by term. Percentage of manual was also required as well as reports of losses outstanding as of December 31 of each year.

At this time it should be noted that companies were asked to start the reporting by term with premiums written during 1949 and there was no attempt made to apply the Statistical Plan for Earned Premiums to any policies written prior to 1949. Because of this decision companies were asked to split their reports starting with January 1, 1949 to show one complete classification of premiums written before January 1, 1949 and losses paid thereon with another complete classification for business subsequent to January 1, 1949 with subdivision of premiums by term, percentage of manual and with losses outstanding also reported. For written paid tabulations the two parts of each company's report are added. For the earned-incurred reports only those amounts subsequent to January 1, 1949 are used. The terms are reported in full years which, for purposes of convenience, are regarded as being either one, three or five.

The computation of premiums earned for any given State, Major Peril and Subcode begins with the term breakdown reported by all companies combined for the year 1949. The following is a partial illustration of the procedure followed although the work is actually done on punched card machines.

ILLUSTRATION OF HOW EARNED PREMIUMS FOR ANY GIVEN MAJOR PERIL AND SUBCODE IN ANY GIVEN STATE ARE COMPUTED

Fractions and Amounts Earned in Years Shown

Premiums Written	*1949*	*1950*	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*
1949—1 Yr. $50	½ or 25	½ or 25						
3 Yr. $60	⅙ or 10	⅓ or 20	⅓ or 20	⅙ or 10				
5 Yr. $70	⅒ or 7	⅕ or 14	⅕ or 14	⅕ or 14	⅕ or 14	⅒ or 7		
1951—1 Yr. $50								
3 Yr. $60	$42							
5 Yr. $70								
		½ or 30	½ or 30					
1949 Earnings on		⅙ or 12	⅓ or 24	⅓ or 24	⅙ or 12			
1949 Writings		⅒ or 8	⅕ or 16	⅕ or 16	⅕ or 16	⅕ or 16	⅒ or 8	
1950—1 Yr. $60								
3 Yr. $72		$109						
5 Yr. $80								
			½ or 25	½ or 25				
1950 Earnings on			⅙ or 10	⅓ or 20	⅓ or 20	⅙ or 10		
1949 and 1950			⅒ or 7	⅕ or 14	⅕ or 14	⅕ or 14	⅕ or 14	⅒ or 7
Writings								
1951 Earnings on 1949-1950 and 1951 Writings			$146					

The above illustration is not a complete one but it does show how premiums earned for any given year are obtained. It will be noted that all of the 1949 writings will be earned by the end of 1954 and will not be included in premiums earned for any year after 1954.

For converting the written premiums by term to earned premiums, it might have been possible to use the statutory fractions such as used in the previous example but for the purpose of recognizing the effect of cancellations a set of factors slightly different from the statutory fractions are computed each year and used instead. The factors are obtained from an annual report supplied by companies entitled "Summary Direct Premiums Written and Contributions to In Force," which for the year 1954 appears as follows:

Study Explanatory Notes on Reverse Side Before Preparing This Report

SUMMARY
DIRECT PREMIUMS WRITTEN AND CONTRIBUTIONS TO IN FORCE
For the Year Ended December 31, 1954

Company or Group or Reporting Association

EFFECTIVE YEARS	TERMS	FIRE — Major Perils 10 & 11		Ext. Cov. Major Perils 20 to 28	
	2 years 1 yr. or less	Direct Premiums Written 1954	Direct Contributions To In Force 1954*	Direct Premiums Written 1954	Direct Contributions To In Force 1954*
		$	$	$	$
1954					
1954	3 years				
1954	4 years				
1954	5 yrs. or over				
1954	1 yr. or less		XXXXX		XXXXX
1953	2 years				
1953	3 years				
1953	4 years				
1953	5 yrs. or over				
1953	1 yr. or less		XXXXX		XXXXX
1952	2 years		XXXXX		XXXXX
1952	3 years				
1952	4 years				
1952	5 yrs. or over				
1952	1 yr. or less		XXXXX		XXXXX
1951	2 years		XXXXX		XXXXX
1951	3 years		XXXXX		XXXXX
1951	4 years				
1951	5 yrs. or over				
1950	1 yr. or less		XXXXX		XXXXX
1950	2 years		XXXXX		XXXXX
1950	3 years		XXXXX		XXXXX
1950	4 years		XXXXX		XXXXX
1950	5 yrs. or over				
All prior eff. years	all terms		XXXXX		XXXXX
Advance Premiums** All years	all terms		XXXXX		XXXXX
Reporting Assn. Prems.** All years	all terms		XXXXX		XXXXX
Canadian & Other Foreign Prems.** All years	all terms		XXXXX		XXXXX
TOTALS		$ To agree with Page 6, Line 1, Column 1	$ XXXXX	$ To agree with Page 6, Line 2,	$ XXXXX Column 1

SIGNED__________________ TITLE__________________

EXPLANATORY NOTES

*"Direct Contributions to In Force" represents full term direct premiums less original premiums cancelled, arising from current year's transactions. Amounts entered as "Direct Contributions to In Force" and corresponding amounts in the "Direct Premiums Written" columns should exclude reporting associations, Canadian and other foreign business. Reporting associations should report in the same manner as a company, with Canadian and other foreign business excluded.

**Required only for purpose of balancing with Annual Statement, Page 6. See Standard Classification (Second Edition — Revised October, 1952) page 4, for list of reporting associations.

Only one statement covering the entire business of a company or group or of an association is required. Statements for individual States should not be furnished. Indicate all credits plainly.

After a statement for the contributions of all companies reporting for earned premiums has been received and a summary of all reports tabulated, the unearned premiums during each year and for each term are computed by applying the complements of the statutory fractions to the various Contributions to In Force totals.

Separate totals for the 1, 3 and 5 year unearned premiums for each effective year are next obtained and each total is subtracted from its corresponding figure for premiums written to obtain 1, 3 and 5 year amounts for premiums earned. These are next divided by the proper premiums written total and a separate ratio of earned to written is produced for 1, 3 and 5 year business. In the Actuarial Bureau these ratios are called factors and as already mentioned they differ somewhat from the statutory fractions and vary from year to year.

To obtain earned premiums the premiums written total for any given class is tabulated by term and grouped as either 1, 3 or 5. The 1-year premiums for the given class is multiplied by the 1-year factor, the 3-year premiums by the 3-year factor and the 5-year premiums by the 5-year factor.

The three figures for premiums earned for the given class are then added and premiums earned for that class results.

In the fire field the volume of business written at other than manual rates is only a small proportion of the total and so far the percentages of manual required by the Statistical Plan for Earned Premiums and Incurred Losses have been used only to exclude deviated business from the National Board's annual earned-incurred tabulations.

Amounts reported for losses outstanding as of December 31 of each year are used in the conventional manner to convert losses paid to losses incurred. Thus, to obtain incurred losses for any given class the losses outstanding at the close of the previous year are deducted from the paid of the given year. Those outstanding at the end are then added. The result represents losses incurred.

STATISTICAL PLAN FOR EXPENSES

As a companion to the Statistical Plan for Earned Premiums and Incurred Losses the Statistical Plan for Expenses was also developed by the National Board and went into effect January 1, 1951. The purpose of the Expense Plan was to produce for any given State and year figures representing total expenses on direct business for fire, extended coverage and other allied lines.

Like the Statistical Plan for Earned Premiums and Incurred Losses, the Statistical Plan for Expenses became effective for duly elected subscribers but since its introduction two States have adopted the Plan and made it mandatory for all stock companies.

Reports on expenses are submitted by companies in a set of six different schedules which cover all of a company's allocable expenses during a given year. The first of the five schedules is for Commissions and Brokerage and in Schedule 1 companies show separately their fire, extended coverage and allied lines commissions by State. Schedule 2 follows the same pattern for Loss Adjustment Expenses, Schedule 3 for Taxes, Licenses and Fees, Schedule 4 for Boards and Bureaus Expenses, with Unusual Expenses being shown on Schedule 5.

The final Schedule — No. 6 — summarizes the totals of the amounts shown by individual States in Schedules 1 to 5 and is reproduced below as an illustration of other details of the Statistical Plan for Expenses.

NATIONAL BOARD OF FIRE UNDERWRITERS
EXPENSE REPORT FOR YEAR 19....

Schedule No. 6. Recapitulation and Reconciliation.

Company or
Group Name..........................Code No.......

	FIRE		EXTENDED COVERAGE		OTHER ALLIED LINES	
	DOLLARS	CTS.	DOLLARS	CTS.	DOLLARS	CTS.
1. Total expenses, excluding federal income and real estate taxes (Insurance Expense Exhibit, Part II, line 15, columns 2, 3 and 4).						
2. Deduct:						
A. Expenses Specifically Assignable by State:						
(a) Sched. 1—Commissions and Brokerage . . .						
(b) Sched. 2—Loss Adjustment Expenses . . .						
(c) Sched. 3—Taxes, Licenses and Fees Incurred.						
(d) Sched. 4—Boards and Bureaus Expenses . .						
(e) Sched. 5—Unusual Expenses						
B. Expenses not applicable to Direct Business:						
(a) Claim Adj. Exp. Incurred—Reins. Assumed—Enter in black						
(b) Claim Adj. Exp. Incurred — Reins. Ceded — Enter in red						
(c) Commissions and Brokerage Incurred — Reins. Assumed—Enter in black						
(d) Commissions and Brokerage Incurred — Reins. Ceded—Enter in red						
(e) Contingent Commissions Incurred on Reins. Assumed—Enter in black						
(f) Contingent Commissions Incurred on Reins. Ceded—Enter in red						
Total Deductions						
3. Expenses Not Specifically Assignable by State. (Items 1 less items 2).						
4. Direct Premiums Written (Insurance Expense Exhibit Part II, line 17, columns 2, 3 and 4).						

Plainly identify all credit figures.
Furnish with these Schedules a copy of your Insurance Expense Exhibit or Exhibits.

Signature........................
Title..................

From Schedule 6 it will be noted that Expense Exhibit totals are given on Line 1 and that the totals of Schedules 1 to 5 are entered in Section 2 A.

Amounts shown in Section 2 B of Schedule 6 are expenses connected with reinsurance and are shown so that figures on Line 3 will contain all unallocable company expenses properly chargeable to the production and handling of direct business.

Line 3 of Schedule 6 being obtained by deducting totals of Schedules 1 to 5 and certain reinsurance expenses from Expense Exhibit totals, represents expenses on direct business which have not been included in Schedules 1 to 5. It appears in order to explain that companies are expected to assign to Schedules 1 to 5 only those expenses which can readily be separated by State. Any item which cannot be readily assigned automatically finds its way to Line 3 of Schedule 6 where other items not covered by Schedules 1 to 5 also appear.

Upon receipt in the Actuarial Bureau the expense reports from the various companies are combined and totals of amounts specifically assigned by States obtained. The total of expenses not specifically assigned as entered on Line 3 of Schedule 6 is also produced and this total is distributed to States according to the volume of premiums written in each State by the reporting companies. When this calculated amount for any given State is added to the total of Schedules 1 to 5 for the same State a figure representing total expenses for direct business in that State is the result.

CATASTROPHE DATA

For the purpose of obtaining information on the losses paid for the various tornadoes, hurricanes and similar catastrophes which occur each year, the National Board began in April 1949 the practice of assigning a catastrophe serial number for all such occurrences. Such numbers are assigned whenever preliminary estimates indicate that the loss will amount to $1,000,000 or more in any State. The procedure applies to subscriber companies alone and the various serial numbers are used by companies for identification of all losses resulting from each occurrence.

Losses paid for the various storms and other disasters are included with the reports of classified experience submitted to the Actuarial Bureau each year but a supplementary report of catastrophe losses is also supplied and these are tabulated to produce totals for the various storms.

NATIONAL BOARD STATISTICAL REPORTS

It has already been mentioned that tables showing annual losses as well as annual numbers of fire alarms appear in the reports of the National Board Committee on Statistics and Origin of Losses which comprises one section of the National Board Annual Proceedings. It has also been mentioned that estimated totals of monthly losses incurred appear in the press and have also appeared in the annual report of the Committee on Statistics and Origin of Losses since 1945.

Under the Standard Classification of Occupancy Hazards three types of report are produced each year for the entire country and for each State as well as for Alaska, Hawaii and Puerto Rico. The first set of reports on the written and paid basis started in 1947 and has been prepared annually since that time for all perils. The second series began with 1953 experience and is on the earned and incurred basis for fire and extended coverage only. The third series is a written-paid five-year composite. The first of these reports covered the period 1947 to 1951 and new tabulations covering the five latest years are also prepared annually.

All of these figures are regarded as confidential and are supplied to the insurance departments and rating bureaus of the respective States and also to member and subscriber companies. The National Board differs from certain other organizations in that it has no jurisdiction or control over premium rates.

APPENDIX

CLASSIFICATION OF FIRE, PROPERTY DAMAGE

Major Peril 10

I *Residential*

Group 1—Residential—including incidental garages and outbuildings

NOTE: — The three Dwelling classes, Code Nos. 009, 019 and 029, have been assigned final digit "9" which is reserved and has not been assigned to other classes in order to facilitate the machine sorting of this type of business. In each of these three classes, "Dwelling" includes those risks as classified by Rating Bureau, not more than four families, and does not include seasonal or farm dwellings.

Class No. 009—Household contents of Dwellings, when contents are written on separate policy.

" " 019—Dwellings—Buildings and Contents, when both are written on same policy.

" " 029—Dwellings—Buildings only when written on separate policy.

" " 002—Household Contents in Mercantile Buildings (Group2).

" " 007—Boarding and Rooming Houses (except seasonal), Nurses' and Sisters' Homes, Fraternity and Sorority Houses—Buildings and Contents.

" " 011—Seasonal Dwellings, Seasonal Boarding and Rooming Houses, Camps, Auto Courts, Tourist Cabins—Buildings and Contents.

" " 021—Farm Property including Tobacco Barns, Live Stock, Growing Crops and Hay and Grain in Stacks—Buildings and Contents.

" " 030—Large Area Housing Developments under Single Ownership (which receive special rating considera-

tion).
" " 031—Apartment Buildings (more than four families) without Mercantile Occupancy.
" " 032—Apartment Buildings (more than four families) with Mercantile Occupancy.
" " 033—Household Contents of Apartments (Classes 030, 031 and 032).

II. *Mercantile*

Group 2—Mercantile Buildings—predominantly Retail or Wholesale Occupancy

Class No. 041—Stores and Dwellings (designed for not more than four families).
Schedule or Class Rated.
" " 042—Mercantile Buildings (without dwelling occupancy).
Class Rated.
" " 043—Mercantile Buildings (other than Class 041).
Schedule Rated.

Group 3 — Mercantile Contents — Retail or Wholesale.

Class No. 051—Heavy Stocks including Machinery.
(Including those of low susceptibility).
" " 052—Wearing Apparel and Textiles.
" " 053—Food Products and Beverages.
(Excluding Restaurants and Bars).
" " 054—Restaurants and Bars.
" " 056—Light Merchandise including Mixed Stocks.
" " 057—Extra Hazardous Stocks.
(Including those of high susceptibility).

III *Non-Manufacturing*
(Buildings and Contents)

Group 4 — Non-Manufacturing.

Class No. 070—Office and Bank Risks including Telephone Exchanges and Telegraph Central Stations and Radio Broadcasting Facilities.
" " 075—Hotels, Commercial Boarding and Lodging Houses, Clubs (City and Country).
" " 083—Theatres and Auditoriums.
Class No. 084—Places of Amusement, Sports and Public Assembly, not included in 083.
" " 085—Hospitals, Sanatoriums, Orphanages, Homes for the Aged and Asylums (except where inmates are under restraint).
" " 090—Churches and Chapels.
" " 093—Automobile Garages, Service and Filling Stations.
" " 094—Airplane Hangars.
" " 100—Penal Institutions including institutions where in-

mates are under restraint.
" " 105—Educational Institutions (Public or Private) including Libraries and Museums and Auxiliary Buildings on Premises.
" " 110—Bridges, Piers, Wharves and Docks including Coal and Ore Docks.
" " 115—Builders' Risks (except Dwellings as classified by Rating Bureau and designed for not over four family occupancy—See Classes Nos. 011, 019 and 029).

Group 5—Warehouse and Storage

Class No. 121—Warehouses—General, Merchandise, Wool.
" " 122—Warehouses—Household Furniture.
" " 123—Warehouses—Cold Storage.
" " 125—Warehouses—Grains, Beans, Seeds, Peanuts and Rice.
" " 130—Warehouses—Cotton including Cotton Compresses and Yards.
" " 135—Warehouses—Fibres (except Cotton and Wool) including Fibre Storage Yards.
" " 140—Warehouses—Waste Paper, Rag and Junk.
" " 145—Warehouses—Whiskey, Wines and Spiritous Liquors.
Class No. 150—Warehouses—Tobacco, including Sales, Storage and Rehandling Houses (for Tobacco Barns, See Class 021).
" " 155—Grain Elevators, Tanks and Warehouses—Terminal.
" " 161—Grain Elevators, Tanks and Warehouses—Country.
" " 165—Lumber Yards, Coal and Wood Yards, Building Material Yards.

IV *Manufacturing*
(Buildings and Contents)

Group 6 — Food and Kindred Products

Class No. 200—Dairy Products including Ice Cream Manufacturing and Ice Factories.
" " 205—Meat Products—Slaughtering, Packing, Curing, Canning and Quick Freezing, including Stock Yards.
" " 210—Fish Products—Packing, Canning, Curing and Quick Freezing.
" " 215—Grain Milling and Other Milling and Cereal Factories, including Feed Mills and Stock Food Manufacturing and Starch Factories.
Class No. 220—Bakeries and Confectionery Products including Cracker, Cake, Macaroni and Chewing Gum Factories.
" " 225—Canning, Preserving and Processing of Foods (except Dairy, Meat and Fish Products) including Dehydrating, Quick Freezing and Coffee Roasting and Salad Oil Preparations.

Class No. 230—Sugar, Molasses and Syrup Refining.
" " 235—Beverages (not made in Distilleries, Breweries or Wineries) including Vinegar Works.
Class No. 240—Breweries including Malt and Yeast Manufacturing.
" " 245—Distilleries.
" " 250—Wineries.
" " 255—Tobacco Factories including Snuff.

Group 7 — Textiles — Raw and Finished

Class No. 275—Cotton Gins including Auxiliary Buildings.
" " 280—Cotton and Woolen Mills, Textile Knitting and Weaving Mills, Thread and Yarn Manufacturing, Bleacheries, Dye and Print Works, Embroidery and Felt Mills, Carpet Factories, Rope, Cordage and Twine Factories.

Group 8 — Clothing and Cloth Products

Class No. 300—Clothing Factories.
" " 305—Millinery and Hats.
Class No. 310—Cloth Products (other than Clothing) including Mattress Factories and Sewing Risks (except as otherwise classified) and Window Shade Factories.

Group 9 — Furs and Fur Goods.

Class No. 330—Fur Dressing, Dyeing, Blending, Sewing.

Group 10 — Leather and Leather Goods

Class No. 340—Tanneries including Hide Processing.
" " 345—Patent Leather Manufacturing.
" " 350—Shoe and Slipper Factories.
" " 355—Industrial Belting and Heavy Leather Goods.
" " 360—Light Leather Products—Gloves, Bags, Bindings.

Group 11 — Wood Products

Class No. 380—Sawmills and Planing Mills, Shingle, Lath and Stave Mills.
" " 385—Mill Yards (For other Yards, see Class 165).
" " 391—Veneer Mills and Laminated Wood Factories.
" " 395—Woodworking including Furniture Factories, Shops and Cabinet Work.
" " 400—Cooperage—Boxes, Baskets, Crates, Excelsior Mills, Wood Flour Manufacturing, Cork Products.
" " 405—Broom and Brush Factories.
" " 410—Wood Preserving Plants.

Group 12 — Paper and Pulp

Class No. 440—Paper and Pulp Manufacturing.
" " 445—Paper Products including Coating and Finishing, Boxes, Tubes, Bags, etc.
" " 450—Pulp Wood Yards, Straw Yards and Baled Waste Paper in Yards.

Group 13 — Printing and Applied Industries

Class No. 480—Printing, Newspapers, Periodicals and Job including Book Binding.
" " 485—Lithographing, Photo-Engraving and Rotogravure Plate Processing (not done in Printing Plant).

Group 14 — Chemicals and Allied Products Including Paint and Pharmaceutical Factories

Class No. 500—Chemical Works—non-hazardous.
" " 505—Chemical Works—hazardous.
" " 510—Chemical Works—extra hazardous.

Group 15 — Plants Fabricating Plastic, Bone, Celluloid and Shell Products

Class No. 550—Plastic, Bone, Celluloid and Shell Products Fabricating (Including Synthetics).

Group 16 — Rubber Products

Class No. 575—Light Rubber Goods and Sundries (including synthetic rubber).
" " 580—Heavy or Industrial Rubber Products including Tires (including synthetic rubber).

Group 17 — Stone, Clay and Mineral Goods

Class No. 600—Stone Crushing, Cutting, Quarrying including Cement and Gypsum Plants and Sand and Gravel Plants.
" " 605—Industrial Abrasives and Asbestos Plants.
★ " " 610—Plaster Products Manufacturing
" " 615—Brick, Tile and Clay Products.
" " 621—Mining Risks (other than Coal) including Salt Works.
" " 625—Mining Risks—Coal including Dredges.

Group 18 — Glass and Glass Products

Class No. 651—Glass and Glass Products Factories (other than as classified below).
" " 655—Cut, Ground, Blown and Art Glass Factories.
" " 660—Optical Goods and Lenses.

Group 19 — Metalworkers

Class No. 681—Heavy Metalworkers including Structural Steel, Heat Treating, Foundries and Heavy Machinery.
" " 685—Light Metalworkers—Machine Shops, and Light Machinery and Metal Specialties including Cutlery Manufacturing.
" " 690—Precision Products—Watch, Instruments, Radio Parts, Jewelry Manufacturing.

Group 20 — Public Utilities

Class No. 730—Electric Traction Property including Trackless Trolleys (excluding Auto Buses).
" " 735—Electric Generating Stations and Auxiliary Risks.

" " 740—Coal, Water and Oil Gas Plants and Natural Gas Pumping Stations.

Class No. 745—Water Works, Pumping Stations, Filtration and Sewerage Plants, Police and Fire Department Stations and Disposal Plants and Incinerators.

" " 750—Scheduled Railroad Property.

Group 21 — Laundries and Dry Cleaning

Class No. 780—Hand and Power Launderies including Dry Cleaning Establishments using only approved solvents (except for spotting).

" " 785—Laundries and Dry Cleaning Establishments (other than as classified under Class No. 780).

Group 22 — Oil Risks

Class No. 800—Oil Refining—Mineral and Petroleum including all Property used in connection therewith.

" " 805—Casing Head Gasoline Plants, Natural Gas and Crude Oil Pumping Stations, Air and Gas Lift Power Houses, Repressuring Plants.

" " 810—Oil Distribution and Tank Wagon Stations.

" " 815—Oil and Gas Well Lease Properties.

" " 820—Non-Mineral Oil Works—Cottonseed, Linseed, Fish, Soya Bean, etc.

V *Sprinklered Risks*

Class No. 900—Sprinklered Risks (other than Manufacturing) Buildings.

" " 905—Sprinklered Risks (other than Manufacturing) Contents.

" " 910—Sprinklered Risks (other than Manufacturing) Buildings and Contents—Blanket.

Class No. 915—Sprinklered Risks (Manufacturing) Buildings.

" " 920—Sprinklered Risks (Manufacturing) Contents.

" " 925—Sprinklered Risks (Manufacturing) Buildings and Contents—Blanket.

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November 15-16, 1956

THE ACTUARY'S NICHE

PRESIDENTIAL ADDRESS BY NORTON E. MASTERSON

A year ago we enjoyed a lively panel discussion on the topic, "What Functions Should a Casualty or Fire Actuary Perform." Subsequent discussion of this topic has resulted in renewed interest in the role of the actuary, among our members. The niche of the actuary in the casualty and fire insurance industry is of concern both to members of the Society and to young people just entering, or about to begin an actuarial career.

We have a not too-well-known profession because it is primarily concerned with the unusual financial and rate-making phases of the insurance business, which phases in themselves distinguish insurance from other financial and commercial activities. A prominent life insurance actuary when attempting to define an actuary said it reminded him of the famous reply of a colored band leader to the man who asked him to define New Orleans jazz: "Man, when you got to ask what it is, you'll never get to know!"

The actuary's position in any particular company, insurance department or bureau depends primarily upon the personal characteristics of the actuary and those of the management under which he works. I don't mean by this that his professional training is not important, but only that it is not the primary factor. A similar situation confronts doctors, lawyers, engineers, and other professional people when they serve as employes. A good research doctor will make no mark at all for himself or the medical profession if he has to be the company doctor for a corporation which wants nothing but low work-injury costs. The actuary will never carve out a place for himself in any phase of insurance in which he is not personally very interested. Neither will he carve out a niche in an area in which he is intensely interested but in which the management of his organization is disinterested. This same situation is basic to any employe-profession, but I am mentioning it here primarily because we can confuse the actuarial field per se and the particular and peculiar characteristics of individual actuaries or of insurance companies and other organizations employing actuaries.

The casualty actuarial profession is a relatively new one, dating from 1914, just after the first state workmen's compensation insurance laws which were enacted in 1911. In the Society we are near the close of the charter member influence stage. Some of our early leaders in the casualty actuarial field had been life actuaries; others were self-made actuarial by-products in a rapidly expanding enterprise.

Our present generation of actuaries is for the first time working in actuarial departments managed by other casualty and fire actuaries. While some had a life actuarial background, most of the pioneer actuaries were much like the original managing heads of many companies and bureaus, possessing an intuitive or built-in practical horse sense variety of actuarial judgment. They were like expert poker or bridge players who observe every law of chance and probability without actually having had any professional training in the theory of probability. Like the sound poker player, these company managers and administrative actuaries were eminently successful. Unfortunately, neither the poker player nor the insurance administrator can pass down his intuition or experience. Even a long period of "kibitzing" or apprenticeship will not transfer the intuitive wisdom from the older head to the new one.

The administrative actuaries, therefore, have had an obligation to translate their experience into recorded scientific knowledge for use by their successors who will not have the opportunity or discipline of "learning things the hard way."

The panel discussion last year illustrated two things. First the career of the actuary is diversified and second there was considerable variation among companies. There is confusion between what an actuary possesses as his special ability and how, or in what area, he is applying this ability.

Fundamentally, it seems that an actuary basically is a person with above average intelligence and ability to think logically and quantitatively and who for some reason or other finds the insurance industry more intrinsically interesting to him than any other. He is a part of the larger student group who go into engineering, mathematics, chemistry, or any other quantitative field.

The actuary can have his special abilities applied to any phase of the insurance organization and operation where the problem to be solved is essentially one which requires a quantitative, logically deduced solution. Incidentally, we should include in this class those problems which essentially are mathematical but do not always have numeric solutions, such as the selection of efficient coding or procedural systems and the project of programming for electronic data processing machines.

This means that the experienced, hence valuable, actuary, even as a specialist, must acquire one of the widest of all backgrounds in the insurance business. He cannot afford to be a person with tunnel-vision or shy away from learning new things; nor can he afford to be uninformed about insurance generally. Furthermore, because he is pretty much his own public relations department, he will have to be able to express himself understandably to his management and, even more important, be able to interpret what management means from what it says.

Actuaries are a scarce quantity in the United States. In proportion to population, we have only one-fifth of the number of actuaries in Great Britain and one-third of the number in Canada. The Census Bureau does not publish occupation classification statistics for actuaries even though they have such data for male midwives, of which there were about the same number as our Society members in the United States in 1950! Less than 1% of the total number of home office people employed in casualty and fire insurance companies and related organizations could be classified as actuaries, all the way from trainee to president. Obviously, there is a definite quantitative limitation on the functions which can be performed by actuaries; but more importantly, it is to the best interests of the insurance enterprise if the qualified actuaries are used where they can be of greatest value to their organization, thus enabling them to earn for themselves the maximum remuneration which their qualifications merit.

In developing a concept of the actuary's role, I am being guided by two important limiting factors which I have been discussing so far: the relatively small number of actuaries, both existent and in prospect; and the inherent, basic, unusual characteristics of the insurance contractual obligation which are actuarial or statistical in nature and content. The logical solution is to have the actuaries specialize in only the unusual actuarial and statistical phases of insurance operations existing in the functional areas of finance, underwriting, claims, financial accounting and cost accounting, and concentrate on the actuarial and statistical problems of the actuarial function-ratemaking. Depending upon insurance company organization and size and the actuary's experience, he could assume either one or a combination of the following: in a policymaking role of keeping his company in financial balance; in a staff capacity giving counsel and advice to operating line functions; or in a line capacity as a mathematician and statistician.

Let's look at some of these specialized tasks for the young actuary in the organization span between the two extremes of actuarial trainees and actuaries who have advanced to top management positions as corporate officers or administrators.

He can function as a statistician, directing statistical research or interpreting the meaning of company or bureau statistics. The importance of the statistical analysis role was in the minds of the charter members when they selected our original name: Casualty Actuarial and Statistical Society of America. The important characteristic which distinguishes an actuary from his associates and enhances his worth to his organization is his concentrated interest in and concern for the meaning of statistics. Many people within and outside home offices of insurance companies and allied organizations review and study statistics; and there are as many interpretations as interpreters, with resultant diverse proposals of corrective action. But the person who has primary concern for and who is the best fitted for finding the true meaning of insurance statistics, applying such knowledge or conveying it to others for action, is an actuary.

The area of this statistical activity includes: the major role of ratemaking, trends, projections; classification systems and statistical plans; financial statement reserves; underwriting guides for acceptance and retention of individual risks and modification of manual rates to reflect individual risk experience; and analyses of operating ratios.

Particularly in multiple line companies, our casualty and fire insurance operations have grown so complicated that standardized thinking and analyses do justice to no single line of insurance. The tendency is to over-simplify because, say the standardizers, how can you analyze the whole unless its parts are exact divisions of the whole? Often the same statistical analysis is applied to auto bodily injury, workmen's compensation, fire, extended coverage and surety business, with results not germane to any line.

The field of insurance cost accounting is a natural for the actuaries trained in statistical analysis. The advent of uniform accounting regulations, the growth of multiple line companies, and the growing importance of internal costs by lines and of expense loadings in insurance rates requires an extension of normal accounting recording of incurred expenses to statistical analyses of expenses as overhead costs by lines of business. Determining the overhead cost of processing casualty and fire insurance lines in a single company or in a group of associated companies requires a new look at traditional concepts of fixed, contractual, and variable expenses for an intangible product like insurance service. New concepts of additional costs, by-product costs, and joint costs challenge the statistical training of the actuary confronted with this different type of cost accounting. The cost of production in other businesses is comparable to loss ratios plus policyholder and claimant benefits and services in insurance operations. In the analysis of company expenses or "overhead" we encounter problems of so-called fixed, variable and joint costs.

The financial statement of a casualty or fire insurance company is not the usual type of accounting statement. Thus our financial results are not as well understood outside our insurance companies as are general commercial statements. In most non-insurance firms the liabilities are relatively fixed dollar-wise as definite ledger items, while many of the assets, particularly raw material or goods in process inventories are subject to periodic appraisal. In the casualty and fire insurance statement the assets are evaluated according to general financial statement and not exclusive insurance practices; however, to the mystification of most non-insurance accountants, the huge liabilities are non-ledger items, inventoried and periodically suspended from financial sky-hooks! This unusual nature of reserves and liabilities and their tendency to extend over long periods into the future open an area of analysis and explanation where an actuary can be of great service to his own company, insurance departments, and the public.

The timing of price changes is one of the most critical fields where the more experienced actuaries can function to develop new statistical techniques for the benefit of their companies and bureaus. As I related in my previous presidential address, the insurance business is unlike commercial and manufacturing businesses and requires different methods of determining costs and establishing prices or premiums. Because loss ratio trends almost never coincide with accounting periods to produce acceptable operating results every year at the stroke of midnight, December 31, we seem to be forever out of step. From the public standpoint, rates are never raised or lowered at the "right" time. Unlike public utility ratemaking, where rate regulation varies with the degree of monopolistic lack of competition, we encounter in the casualty and fire insurance business varying forms of regulation and control even in places and in lines of business subject to the most terrific inter-company competition. Considering this unbalanced status of regulation and control relative to competition and the regulatory scrutiny of calendar year financial operations, it is imperative that we improve the timing of rate changes and the support thereof. Can company, bureau, or insurance department actuaries come up with a good recipe using correct portions of these ingredients: past experience, current insurance and external trends, electronic data processing, plus prompt regulatory approvals?

In the new fields of operations research and electronics, the young actuaries who have entered casualty and fire insurance companies in recent years are going to be "drafted" for this specialized work, particularly in those companies which cannot afford the luxury of two stables of mathematically-trained work horses. Incidentally, the fields of operations research and electronic data processing are becoming very competitive to actuarial recruiting. A prominent life insurance actuary interested in these electronic fields stated that whereas from two to four thousand are presently employed in these fields, it is expected that there will be about one million by 1964.

If the future actuary in the casualty and fire fields is to assume these specialized roles, he must, of necessity, refrain from performing any and all tasks which can be done equally well by non-actuarial people. In only that way can he have the time and energy to devote to those tasks for which he, and he alone, is best qualified.

The need for and demands upon actuaries increases in times of crisis because in those times there are more unanswered and presently unanswerable questions bothering management. Reminds one of the little boy who, upon being questioned by his minister, said he prayed every night; but when asked if he didn't also pray in the morning, said: "No, never. I'm not afraid in the daytime!" And how can any multiple-line company, insurance department, or bureau get by in these complex times without one or more crises to scare management each year!

As a closing word to the new Fellows and Associates of this and recent years, let me quote directly from the presidential address of a former president of this Society in a year before many of you were born and when I was still a college student:

> "It may not be amiss to pause a moment and reflect upon the developments which have taken place in casualty actuarial science, particularly to note what those developments indicate as to the future of the casualty actuary. The older members of the Society have often undoubtedly indulged in such reflections and

have perhaps at such times been extremely pessimistic about the future. My own thoughts, for what they may be worth, are primarily intended for our younger members—those who have not become case-hardened to the flippant criticism of actuaries and actuarial methods and who may be inclined to let such criticism impair their future usefulness. And let me hasten to add that to my way of thinking the opportunity for men and women properly trained in the fundamentals of casualty actuarial science was never greater than it is today and will be for some time to come."*

The actuary's niche is a place of quality performance fundamental to and inherent in the basic laws governing insurance enterprise. We are a minority group with major responsibilities. Ogden Nash was thinking like a conscientious actuary, concerned with his unlimited opportunities and responsibilities, when he wrote these lines:

Oft, in the stilly night
  When the mind is fumbling fuzzily,
I brood about how little I know,
  And know that little so muzzily.
Ere Slumber's chains have bound me,
  I think it would suit me nicely,
If I knew one tenth of the little I know,
  But knew that tenth precisely.

*"The Present Outlook for Casualty Actuarial Science," presidential address by William Leslie, May 23, 1924, P.C.A.S. *X*

THE RATE LEVEL ADJUSTMENT FACTOR IN WORKMEN'S COMPENSATION RATEMAKING

BY MARTIN BONDY

Questions have been raised recently concerning the effectiveness and propriety of the Rate Level Adjustment Factor currently in use in New York and most other states for Workmen's Compensation ratemaking. I have undertaken to evaluate the current procedure on the basis of the information available to me—New York State data from two distinct sources.*

Analysis Based Upon Unit Report Data

The technique used is a comparison of policy year loss ratios developed to an ultimate status on two bases. The first is merely a development of the actual loss ratio. The second is a development of the loss ratio which would have resulted had rate level adjustment factors not been used in the ratemaking process.

The data found in this section have been taken from Exhibit A of the New York Workmen's Compensation Rate Filing effective 7/1/56. The following are the raw figures:

P.Y.	*Half*	*Report*	*Indem. Losses*	*Med. Losses*	*Stand. Prem.*	*Loss Ratio*
48	2	5	39,138,212	13,030,995	92,596,355	.563
49	1	5	46,555,513	16,309,340	109,754,030	.573
49	2	5	41,423,424	14,169,670	92,842,380	.599
50	1	5	50,285,743	18,922,692	116,610,899	.593
50	2	4	45,928,178	16,849,271	103,050,333	.609
51	1	4	53,512,056	20,858,178	127,419,662	.584
51	2	3	42,048,235	16,968,752	117,185,037	.504
52	1	3	50,932,674	21,378,423	155,529,202	.464
52	2	2	37,382,325	16,185,704	129,450,486	.414
53	1	2	48,246,335	20,630,696	167,657,411	.411

* (1) Unit Report Cards of CIRB.
(2) New York Supplemental Insurance Expense Exhibit.

In order to develop these to an ultimate basis the following factors have been used:

*Development Factors**

Development From	*To*	*Indemnity*	*Medical*	*Premium*
4th	5th	.9880	.9960	1.0001
3rd	4th	1.0061	.9972	1.0000
2nd	3rd	1.0197	1.0004	1.0002

From the record of past rate filings we have:

Rate Level Adjustment Factors and Wage Factors

Date of Revision	*RLAF*	*Wage Factor Used*	*Undiscounted Wage Factor#*
7/1/48	1.000	—	—
10/1/49	.999	—	—
10/1/50	1.000	—	—
7/1/51	1.057	—	—
1/1/52	1.023	—	—
12/1/52	1.022	.9830	.961
7/1/53	1.015	.9850	.966
7/1/54	.972	.9835	.962
7/1/55	.928	.9874	.969
7/1/56	.966	.9913	.980

* Derived as the averages of the indications of the latest three policy years.
# The undiscounted Wage Factor represents the Wage Factor which would have been indicated in the absence of The Rate Level Adjustment Factor.

Combining all the above data we arrive at the following table which represents an estimate of what would have occurred had no Rate Level Adjustment Factor been in use.

Analysis of Effect of Rate Level Adjustment Factor

(1) P.Y.	(2) Half	(3) Report	(4) Developed Loss Ratio	(5) RLAF*	(6) Wage Factor*	(7) Undiscounted* Wage Factor	(8) Adjusted# Loss Ratio
48	2	(5)	.563	1.0000	—	—	.563
49	1	(5)	.573	1.0000	—	—	.573
49	2	(5)	.599	.9995	—	—	.599
50	1	(5)	.593	.9990	—	—	.592
50	2	(4)	.603	.9995	—	—	.603
51	1	(4)	.578	1.0000	—	—	.578
51	2	(3)	.500	1.0570	—	—	.529
52	1	(3)	.462	1.0230	—	—	.473
52	2	(2)	.417	1.0228	.9972	.9935	.428
53	1	(2)	.414	1.0220	.9830	.961	.433

* Weight assigned to figures on previous exhibit on the basis of effective date.
\# (8) = (4) × (5) × (6) + (7).

The permissible loss ratio on a Standard Premium basis is about 56 per cent. From the above table we can see that where the Rate Level Adjustment Factor had an effect on the loss ratio, it was a disturbing one. That is, for the five periods where the adjusted loss ratio was different from the unadjusted loss ratio, the adjusted figure was closer to 56 per cent.

Analysis Based Upon Supplemental Insurance

Expense Exhibit Data

In order to check on the results derived in the previous section, data from another source have been used. The information shown below can be found in "1955 Loss and Expense Ratios" published by the New York Insurance Department.

Loss Ratio Developments

P.Y.	*Development From*	*12-24*	*24-36*	*36-48*	*48-60*	*60-72*	*72-84*
1947							1.000
1948						1.003	.998
1949					1.008	.992	.995
1950				1.015	.994	.997	
1951			1.005	.987	.995		
1952		.813	.964	.994			
1953		.773	.974				
1954		.782					
Average		.789	.981	.999	.999	.997	.998

We can use the above factors to operate on the following set of loss ratios:

P.Y.	*Loss Ratio as of 12/31/55*	*Developed*
1948	.627	.627
1949	.639	.639
1950	.656	.655
1951	.597	.594
1952	.509	.506
1953	.480	.477
1954	.514	.501
1955	.708	.544

Combining these loss ratios with the Rate Level Adjustment Factors and Wage Factors as before we arrive at the following:

Analysis of Effect of Rate Level Adjustment Factor

(1) *P.Y.*	(2) *Developed Loss Ratio*	(3) *R.L.A.F.*	(4) *Wage Factor*	(5) *Undiscounted Wage Factor*	(6) *Adjusted Loss Ratio*
1948	.627	1.0000	—	—	.627
1949	.639	.9998	—	—	.639
1950	.655	.9993	—	—	.655

1951	.594	1.0285	—	—	.611
1952	.506	1.0229	.9986	.9968	.519
1953	.477	1.0185	.9840	.9635	.496
1954	.501	.9935	.9843	.9640	.508
1955	.544	.9500	.9855	.9655	.528

Since the above figures are on a Net Premium basis, the permissible loss ratio involved is about .595. It can be seen from these ratios that the use of the Rate Level Adjustment Factor accounted for "better" rates in two years and "worse" rates in three years.

From the two analyses made above it appears that more often than not, the Rate Level Adjustment Factor has produced a distorting influence upon the rates. If use of this factor is likely to produce unfavorable results then it represents not an improvement but a deterioration of the ratemaking process. Still, it is felt that there should be some method for bringing pure policy year results more up to date. A possible solution to this problem is presented in the second portion of this study.

*A "New" Rate Level Adjustment Factor Formula**

At the outset it is desirable to restate the origin and nature of the problem. Chiefly it is the result of a conflict between recentness and reliability. It has long been agreed that policy year data do not provide a sufficient degree of responsiveness to changing conditions to produce correct rate levels. In order to attain the desired responsiveness we have turned to the experience of the latest calendar year. This move, as has been demonstrated earlier, has also produced its attendant problems.

Calendar year experience is unreliable. Premiums do not correspond exactly to losses. Momentary situations can cause great swings in results. Even the weather may play a part. An inclement December might well cause a reduction in the number of audits and hence have an effect on premiums for two calendar years. These facts have never been disputed. They have been accepted but no account is taken of them in the Rate Level Adjustment Factor formula now being used. The current formula gives greater weight to calendar year results than to policy year results. It would seem that the problem could be solved by injecting the calendar year statistics into the ratemaking process in a slightly different fashion than is now the case in order to make optimum use of these figures.

While it is true that calendar year data are not sufficiently accurate for use in defining minute changes, still, for the purpose of reflecting gross modifications in the character of recent experience they can continue to serve a useful function. This thought leads directly to the

* The views and opinions set forth in this section of the paper are those of the author and should not be taken to reflect the position of the New York Insurance Department.

formulation of a system wherein the greater the deviation from "normal" indicated by calendar year statistics, the more the credibility assigned to them. A means of implementing this idea is one which is doubtless familiar to all actuaries. It is an adaptation of the first Rate Level Adjustment Factor procedure used in New York State. This formula, it will be remembered, incorporated the idea of a Neutral Zone. The exact formula would depend upon certain conditions to be established in advance. As an example let us set the following conditions:

PLR	=	.565
Maximum Credibility	=	.40
Maximum RLAF	=	1.10
Minimum RLAF	=	.90

Then the loss ratio underlying a 1.10 RLAF would be determined as follows:

$$1.10 = \frac{.40 \text{ Loss Ratio (max)}}{.565} + .60$$

$$\text{Loss Ratio (max)} = .706$$

The Neutral Zone would be derived in the following manner:

$$\text{RLAF} = \text{Loss Ratio} - \text{PLR} \pm \text{NZ} + 1$$

$$1.10 = .706 - (.565 + \text{NZ}) + 1$$

$$\text{NZ} = .041 = .040 \text{ (rounded)}$$

In other words, under this neutral zone system any calendar year loss ratio between .525 and .605 would produce a Rate Level Adjustment Factor of unity. It can be seen that the credibilities implicit in this formula range from a low of 0 to a high of 40% depending upon the departure of the experience from normal.

By way of briefly justifying this type of approach it may be pointed out that for the two years where the Rate Level Adjustment Factor did produce some improvement in rates, the factors would have done likewise under the proposed system. For the remaining years where the effect of the Rate Level Adjustment Factor was a disturbing one, the factors produced under the proposed system would have been 1.000 since the results fell within the Neutral Zone.

A concluding word of caution appears in order. It will be noted that the suggested Rate Level Adjustment Factor formula produces an improvement in the rating procedure. However, the gap between the experienced and expected results remains uncomfortably large. Continued research into the problem is required in order that we may arrive at a more satisfactory method of prediction.

CURRENT RATE MAKING PROCEDURES FOR AUTOMOBILE LIABILITY INSURANCE

BY

PHILIPP K. STERN

This paper presents a description of basic procedures currently used in rate making for Automobile Liability Insurance. Like Mr. Marshall's paper on Workmen's Compensation Insurance Rate Making, this paper is directed at the student of casualty insurance. The presentation of the subject is purely descriptive and does not attempt any evaluation of the rate making procedures, nor does it contain any original research. Technical terms will be explained as they occur, and examples of the various steps involved in the rate making process will be illustrated by exhibits taken from the most recent rate revisions, primarily the most recent private passenger rate revision in New York.

In that state and in a limited number of other states, rates for automobile liability insurance are jointly developed by the National Bureau of Casualty Underwriters and the Mutual Insurance Rating Bureau. The rate making procedures used by the two organizations in these cooperation states are generally used by each Bureau in all other states. In some of the cooperation states, the rates developed by the National Bureau and the Mutual Bureau, upon approval from, or promulgation by, the rate supervisory authority, are applicable to all companies in that state. In other states, the rates developed jointly by the two Bureaus or separately by each Bureau are applicable, after approval, only to the members and subscribers of the National Bureau and the Mutual Bureau respectively.

RATE MAKING STATISTICS

Automobile liability insurance rates are based upon experience. Corresponding to the breakdown of the rate into the expense portion and the loss portion, separate statistics are compiled on expense experience and loss experience.

The basis for the expense experience is the Insurance Expense Exhibit which provides countrywide data by line of insurance including automobile bodily injury and property damage liability insurance. This paper will make only brief reference to this phase of the rate making process, in connection with the expense loading in manual rates.

The basis for the loss experience are the data reported by the companies under annual calls for experience. Such calls set forth the detail in which the experience is to be reported for the various groups of classifications, such as private passenger cars and commercial cars. Instructions for the recording and coding of the experience are contained in the statistical plan.

The importance of reliable statistics is recognized in the rate administration section of the Casualty Insurance Laws of the various states which provide that "the [commissioner] shall promulgate reasonable rules and statistical plans, reasonably adapted to each of the rating systems on file with him, which may be modified from time to time and which shall be used thereafter by each insurer in the recording and reporting of its loss and countrywide expense experience, in order that the experience of all insurers may be made available at least annually in such form and detail as may be necessary to aid him in determining whether rating systems comply with the standards set forth in Section 3."*

The insurance laws further provide that "the commissioner may designate one or more rating organizations or other agencies to assist him in gathering such experience and making compilations thereof," and that "such compilations shall be made available, subject to reasonable rules promulgated by the commissioner, to insurers and rating organizations." Accordingly, statistical plans have been promulgated or approved by the rate supervisory authorities in almost all states, and statistical agents have been appointed who collect and compile the loss experience which is to provide a basis for rate review and rate making.

The loss experience used in the rate making procedures described in this paper is generally the experience gathered by the National Bureau of Casualty Underwriters and the Mutual Insurance Rating Bureau. The Automobile Bodily Injury and Property Damage Liability Statistical Plan, jointly developed by both organizations and published by the National Bureau, is adapted to the rating systems in effect for the members and subscribers of the National Bureau and the Mutual Bureau, and the annual Calls for experience issued by both Bureaus provide for the reporting of loss experience in the detail required for the review of these rating systems.**

THE AUTOMOBILE BODILY INJURY AND PROPERTY DAMAGE LIABILTY STATISTICAL PLAN

Automobile liability insurance experience is compiled on a policy year basis§ which requires the recording of statistics on policies having

* Section 13 of the Casualty and Surety Rate Regulatory Bill (All-Industry Commissioners' Draft) which served as model for rate regulatory laws in most states.

**For companies which are neither members nor subscribers but report experience to either Bureau as their statistical agent, the Plan includes a provision for the identification and separate reporting of business not written in accordance with the definitions of coverages, classifications and territories set forth in the Automobile Casualty Manuals published by the National Bureau and the Mutual Bureau respectively.

§ Since January 1, 1953, the statistical plan provides also for the reporting of statistical detail for the compilation of private passenger and commercial non-fleet experience on a calendar-year-accident year basis. At the time of this writing, this method of compiling experience is in an experimental stage.

an effective date in a given calendar year separate and distinct from the statistics on policies with effective dates in other calendar years. By this method, exposures, premiums, losses and the number of claims for all policies with effective dates in the particular year are brought into direct relationship. This is accomplished by recording as the Policy Year on all entries for a policy, the year of the effective date of the policy.

The Plan contains instructions as to the detail in which experience is to be recorded. There are two basic characteristics of detail of experience: Classification and Territory.

With respect to classification detail, the statistical plan provides, with only minor exceptions, for separate codes for every manual# classification for which separate rates are established. For example, if there are 9 private passenger classifications for which rates are published, the statistical plan provides for as many statistical codes, viz:

Class	*Code*†
1A	1111
1B	1121
1C	1131
2A	1211
2C	1231
3	1301
1AF	1151
2AF	1251
2CF	1271

† These codes apply for cars insured for liability coverage only. Additional Codes are set forth in the statistical plan for private passenger cars to reflect inclusion of Medical Payments Insurance and the application of the multi-car discount.

For commercial cars, separate codes apply by rate class, size type and distance of operation, corresponding to the rating criteria in the manual. In addition, the plan at this time also provides for coding by commercial car use classification, corresponding to the use classification shown in the Commercial Section of the Automobile Casualty Manual. Similarly, separate codes are used for the various types of public automobiles, the divisions for garage liability, and various miscellaneous classifications and special types of coverages. Occasionally, the plan may require statistical detail greater than the detail reflected in the rating system, if such detail is required for analytical studies and if it can reasonably be obtained from the company records. For example, at the present time the statistical plan requires the coding and reporting of experience on Garages—Division 1 by indus-

The Automobile Casualty Manuals of the National Bureau of Casualty Underwriters and the Mutual Insurance Rating Bureau.

try classifications (New Car Dealers, Used Car Dealers, Service Stations, etc.) although no rate distinction is made between these classifications in the Automobile Casualty Manual. Other detail required for analytical studies is sometimes obtained from special calls for experience or sampling studies, such as the distribution of premiums by policy limits needed for the review of increased limits experience.

With respect to territory detail, the plan provides, again with minor exceptions, that all business shall be recorded by the territory codes established in the plan. There is a separate statistical code in the plan for every state (including the District of Columbia, Alaska, Hawaii and Puerto Rico); most states are further subdivided into statistical territories which are identified by distinct codes. For example:

Alabama—State Code 01	
Territory	
Birmingham	0104
Mobile and Montgomery	0194
Remainder of State	0196

Thus, exposures, premiums, losses and number of claims are recorded by the carriers in detail by statistical classification and territory. The Automobile Bodily Injury and Property Damage Liability Statistical Plan further provides for the separation of losses and number of claims incurred under the liability coverages and Medical Payments Insurance, and requires individual reports on each accident involving an incurred loss in excess of basic limits.

EXPERIENCE CALLS

The detail of reporting experience is set forth in the annual "Call" which is issued by the Bureaus early each year to all companies due to file experience. Under the present method of reporting, the requirements of the Call are partly met by transaction reports and partly by summarized reports by the companies. In order not to complicate the presentation in this paper, this detail will be disregarded and the Call will be described in terms of the end product it produces at this time. The annual calls for experience do not necessarily require the reporting of all the experience in all the detail in which it is recorded by the companies. For private passenger cars, which is the most important group of classifications in terms of premium volume, the experience is reported in full detail by classification within territory, and the reports include experience for the policy year ended December 31 of the preceding year; on the other hand, for classifications producing sparse volume, such as buses, experience may be reported on a statewide basis and only for a "complete" policy year. The determination of the detail of experience reports has to be governed by the rate making needs; due consideration, however, also has to be given to the value of the information to be obtained in relation to the expenditure in manhours and equipment it takes to produce the data, and the ability of the companies and the Bureau to produce and process the reported data within reasonable time limits. The result of this process of review and evaluation of current and prospective needs for rate making data is reflected in the statistical program. A typical statistical program can be reviewed from the 1956 Official Call for Automobile Liability Insurance Experience.

Experience under the 1956 Call was reported "as of December 31, 1955." This term denotes the valuation date of the policy year experience with respect to written exposures and written premiums. Incurred losses were compiled for each of the reported policy years valued as of March 31, 1956.

Under the policy year method of experience compilation, the experience for the policy year is not complete until all policies written during the year have expired. For example, as of December 31, 1955, the exposures and premiums on the unexpired policies, written during 1955, were subject to change due to cancellations and endorsements which may occur through the end of the following year. Additional accidents can be expected to occur on the policies which remain in force beyond December 31, 1955 resulting in additional incurred losses. Therefore, "Policy Year 1955, as of December 31, 1955" is an "incomplete policy year." It is also referred to as the "policy year as of 12 months," i.e. the experience for the policy year 12 months after the beginning of the year. Correspondingly, policy year 1954, as of December 31, 1955, is "as of 24 months," policy year 1953 "as of 36 months" etc.; these policy years are "complete policy years," as of December 31, 1955.

The detail in which the experience was reported is briefly outlined as follows:

PRIVATE PASSENGER CARS

The experience on private passenger cars was complied by class within statistical territory for each state, separately for bodily injury and property damage liability for policy years 1955, 1954 and for bodily injury only for policy year 1953. As noted above, policy year 1955 was an "incomplete" year, since policies written during 1955 were still in force as of its valuation date. Policy year 1954 was reported "as of 24 months," which was the second reporting for the policy year, the first reporting having been made under the 1955 Call. Bodily injury incurred losses and number of claims for policy year 1953 were reported by class and territory "as of 36 months," which was the third reporting on the same policy year. This requirement of reporting applies to private passenger non-fleets. Private passenger cars written in connection with fleets are reported only as of 24 months and as of 36 months, as are commercial fleets.

COMMERCIAL CARS

Commercial cars written on a specified car basis and not under a fleet plan are reported in the same manner as private passenger non-fleets. Experience on commercial cars written under a fleet plan is reported in the same detail except that no reporting is obtained as of

12 months. Because of the automatic coverage provision for newly added cars under the fleet plan and the effect of lay-up of trucks during the policy term, the exposures and premiums on fleet risks are not definitely known until the final audit is made after the expiration of the policy. Many companies do not even code their fleet business at the inception date of the policy, but do the coding upon final audit. It is, therefore, not feasible to compile fleet experience as of 12 months under the present method of operation. The first reporting on fleets is made as of 24 months; under the 1956 Call, commercial fleets were therefore reported for policy year 1954. A second reporting was obtained under that Call on policy year 1953, which is a reporting as of 36 months, in complete detail by class and territory, on exposures, premiums, incurred losses and number of incurred claims.

GARAGES

At the present time, garage liability insurance experience is reported separately for Division 1 and Division 2, by statistical territory, for all payroll classes combined. A first reporting is obtained as of 24 months and a second complete reporting as of 36 months since this is an audited line for which the final exposures and premiums are determined after the expiration of the policy.

PUBLIC AUTOMOBILES AND MISCELLANEOUS CLASSIFICATIONS

The more important classifications among the public automobiles are taxicabs, public livery and private livery. Experience on these Classifications is generally obtained by class and statistical territory as of 24 months and as of 36 months. The other classifications are generally reported statewide.

Each part of the experience has to be filed by the companies with the Bureau on or before specified dates set forth in the experience calls.

The foregoing is only a brief outline of the form in which automobile liability insurance experience is reported. The complete detail can be obtained by referring to the calls issued by either the National Bureau or the Mutual Bureau.

CONSOLIDATIONS OF EXPERIENCE

The experience filed by the companies is first reviewed by the Bureau for possible errors. Any errors which are found are corrected after correspondence with the company which filed the report. When all reports are in order, they are consolidated into a tabulation of the combined experience of the reporting companies, in the same detail as required by the Call. These tabulations are prepared in separate sections corresponding to the items of the Call, such as private passenger cars, commercial non-fleet, commercial fleet, etc. with separate tabulations for each state. A copy of each of these tabulations is filed with the respective state insurance department in fulfillment of the Bureau's obligation as an official statistical agent.

As an illustration of the form of such tabulation, there is shown on Exhibit A a page of the tabulations of private passenger experience for policy year 1953 for the state of New York, as compiled by the Mutual Insurance Rating Bureau. An inspection of this tabulation offers the opportunity to define commonly used terms which have not yet been explained in this paper.

The headings and the numerical designations on the left side of the tabulation identify the tabulation as to its content. They should be self-explanatory. The data are shown under the following headings:

WRITTEN EXPOSURE

For private passenger cars, the unit of exposure is "car year" that is one car insured for one year.* The same measure of exposure applies to all automobile liability insurance written on a specified car basis. Other types of exposure such as mileage, earnings, gross receipts are in use, depending upon the underwriting basis used for different types of insured hazards.

WRITTEN PREMIUM

The written premium reported is the total premium charged for the policy including the charge for increased limits. If medical payments insurance is provided, the premium for this coverage is included in the bodily injury liability premium. The written premium also reflects any modification resulting from the application of experience rating and schedule rating plans. It does not reflect, however, any adjustments resulting from the application of retrospective rating plans and premium discount plans and, with respect to policies written under a Fleet Plan, the premium reduction resulting from the Automobile Fleet Plan. These adjustments are recorded under separate codes.

INCURRED LOSSES AND NUMBER OF CLAIMS

As previously noted, the incurred losses and number of claims are reported separately for liability insurance and medical payments insurance. The reported losses include allocated loss adjustment expenses. Incurred losses include all loss payments and all reserves on claims not settled as of the valuation date of the reporting.

EXCESS LOSSES—EXCESS PORTION

An excess loss is defined as the total incurred loss (exclusive of loss adjustment expenses) in excess of basic limits of $5,000/10,000 for bodily injury and $5,000 for property damage liability†. Companies are required to file with the Bureau "Individual Reports of Excess Losses" on each accident involving an incurred loss in excess

* Exposures are reported in car months and converted before consolidation into car years and tenths of car years.

† In a few states, different basic limits apply for certain public automobiles.

of these basic limits, and the Bureau determines from these reports the amount of the excess portion.

The tabulations just described are the basic material needed for a review and eventual revision of rates. Before the actual review can begin, the data have to be arranged in suitable exhibits, and certain preliminary calculations are required. These preliminary steps will be dealt with next.

THE LOSS DEVELOPMENT FACTOR

In the outline of the statistical program above it was noted that bodily injury incurred losses are reported in classification and territory detail developed to 36 months. Although experience has shown that the 24 months losses are in the aggregate very close to the losses in the final reporting, provisions are made in the Bureau rate making procedure for the adjustment of the losses reported as of 24 months to an ultimate (36 months) basis for the states in which the experience of all companies or substantially all companies is used for rate making. This adjustment is made by the application of a Loss Development Factor based upon the loss development of prior policy years. The calculation of this Loss Development Factor used in the 1956 revision of rates for private passenger cars in the state of New York, is shown below:

	Incurred Losses Basic Limits		
(1) Policy Year	*(2) as of 24 months*	*(3) as of 36 months*	*(4) Loss Dev. Factor (3) ÷ (2)*
1950	$57,876,322	$57,976,909	1.002
1951	67,961,788	67,798,198	.998
1952	66,584,059	65,568,694	.985
3 Year Mean			.995

In that revision, the Loss Development Factor of .995 was used, representing the mean of the loss development of the prior three policy years. Although it is desirable to maintain consistency in the rate making procedure, including consistency with respect to the calculation of the Loss Development Factor, circumstances may at times indicate the use of a shorter or longer experience period for the calculation of this factor.

The Loss Development Factor is applied to the Statewide incurred bodily injury losses for the year reported as of 24 months. No attempt is made to develop the losses by territory and class from 24 months to 36 months on the basis of this factor.

There is no need for a similar procedure with respect to property damage losses, since such losses can be settled more promptly than bodily injury losses; also, loss reserves on property damage claims open at the loss valuation date of the policy year reported as of 24 months are not subject to the uncertainties as to their final cost which are encountered on bodily injury claims.

THE EARNED FACTOR

As previously set forth, the latest policy year used for rate making for private passenger and commercial cars (non-fleet) is an "incomplete policy year" reported as of 12 months. It is adjusted to an ultimate basis by Earned Factors calculated from the observed development of prior policy years from 12 months to an ultimate basis. The calculation of these factors in the latest New York rate revision for private passenger cars is shown as follows:

Bodily Injury—Basic Limits

(1)	*No. of Written Car Years*		*Incurred Losses*	
Policy Year	*(2) 12 Months*	*(3) Final*	*(4) 12 Months*	*(5) Final (a)*
1952	2,079,685	2,085,145	35,369,982	65,568,694
1953	2,177,435	2,168,448	39,145,075	72,632,151
1954	2,201,853		42,560,606	

	Pure Premiums Basic Limits		*(9)*
(6) Policy Year	*(7) 12 Mos. (4) ÷ (2)*	*(8) Final (5) ÷ (3)*	*Ratio of Pure Premiums Basic Limits (7) ÷ (8)*
1952	17.01	31.45	.541
1953	17.98	33.49	.537
1954	19.33		
Two Year Mean			.539

Property Damage—Basic Limits

(1)	*No. of Written Car Years*		*Basic Limits Incurred Losses (b)*	
Policy Year	*(2) 12 Months*	*(3) Final*	*(4) 12 Months*	*(5) Final*
1952	2,074,593	2,080,666	13,901,622	24,068,484
1953	2,172,276	2,162,010	14,278,147	25,453,510
1954	2,199,574		14,752,184	

(a) The basic limits incurred losses for policy year 1952 are reported as of 36 months. The policy year 1953 losses of $72,997,137 reported as of 24 months were adjusted to an ultimate basis by the application of the loss development factor of .995.

(b) Incurred losses for policy years 1952 and 1953 reported as of 24 months.

(6) Policy Year	Pure Premiums Basic Limits (7) 12 Mos. (4) ÷ (2)	(8) Final (5) ÷ (3)	(9) Ratio of Pure Premiums (7) ÷ (8)
1952	6.70	11.57	.579
1953	6.57	11.77	.558
1954	6.71		
Two Year Mean			.569

The above ratios of the pure premiums Col. (9) produced the earned factors, which in this case were based upon the mean ratios of policy years 1952 and 1953. The same procedure is used for the calculation of the Earned Factors in the other states where rates are based upon a substantial volume of experience. In states with a lesser volume chance fluctuations in the earned factors are reduced through the use of a formula by which earned factors are calculated as weighted averages of state and countrywide indications based on pure premium and claim frequency ratios. The calculation of Earned Factors by that formula method is demonstrated in the attached Exhibit B.

The earned factors so calculated are applied as multipliers to the written exposures and written premiums of the latest policy year reported as of 12 months; the results are earned exposures and earned premiums. Basically, the earned factor reflects the rate at which the written exposures and premiums are earned, but it also gives recognition to any development on reserves on claims outstanding as of 12 months and to any changes in claim frequency and average claim cost on accidents occurring between 12 months and 24 months after the beginning of the policy year. A significant increase in claim frequency or severity during the second half of the policy year compared with the first half will add a larger amount of losses or a larger number of claims during the second half than would correspond to the portions of the policy year exposures still in force if the claim frequency or severity had remained unchanged. This would produce a high pure premium as of 24 months, and a low earned factor. The reverse would occur if claim frequencies or average claim costs declined during the second half of the policy year. All other things being equal, the earned factor is expected to be reasonably stable from year to year, provided it is based upon a credible volume of experience. The Earned Factors for the incomplete policy year during the past five years in New York will serve as an illustration:

New York—Private Passenger Cars

"Incomplete" Policy Year	Earned Factors Bodily Injury	Property Damage
1950	.537	.562
1951	.511	.552
1952	.511	.561
1953	.525	.577
1954	.539	.569

Later on in this paper a modification of the bodily injury earned factor will be explained for application to 10/20 limits experience.

EXPERIENCE EXHIBITS

An important phase of the rate making process is the arrangement of all necessary data in such form that they can readily be used and reviewed. Each exhibit should contain as much information as is required in support of the specific step in the rate making process which it serves. One of the basic exhibits used for rate making is the exhibit of territory experience for the latest 5 policy years. Exhibit C presents 2 pages of the exhibit of New York private passenger experience for policy years 1950-1954 (Bodily Injury and Property Damage). This exhibit contains the combined experience of the members and subscribers of the National Bureau of Casualty Underwriters and the Mutual Insurance Rating Bureau, which is the experience now used in rate making for automobile liability insurance by both Bureaus in New York.* It shows, for each statistical territory, the experience by policy year for all private passenger classes combined. It will be noted that the policy year 1954 exposures and premiums are adjusted to an earned basis by applying the earned factors previously explained to the written exposures and premiums which are shown on the extreme right of the exhibit. The incurred indemnity losses are at basic limits, with the excess portion shown in a separate column. The claim frequencies, average claim costs, loss ratios and pure premiums are explained in the footnotes on the exhibit.

THE RATE FILING

The rate filing consists of a memorandum which explains the various steps in the development of the rate revision, supporting exhibits and an exhibit of proposed rates. It is submitted with a letter of transmittal which usually specifies the proposed effective date of the

* Prior to policy year 1949, the combined experience of all companies was used for rate making in New York. The experience used now in New York does not include that of non-Bureau companies, who do not use Bureau rates and have diverse classification systems.

revised rates. The major steps in the development of the rate revision are:

Determination of Statewide Rate Level
Development of Rate Level Changes by Territory
Calculation of Classification Rates

Generally, rate revision programs for any given year and group of classifications reflect a pattern which is followed in all states with such departures for individual states, territories or classes as are clearly indicated by circumstances. The pattern established for determination of the statewide rate levels in any given cycle of rate revisions, the formula used for the development of territory rate level changes, the method of evaluation of the experience through the use of credibility tables, all these and other steps in the rate making process have the objective of producing consistency in the interpretation of experience.

THE STATEWIDE RATE LEVEL

The first step in the determination of the indicated overall change in rate level is the selection of the experience period to be used. It is desirable to reflect in the rates to be established the most recent levels of claim costs and claim frequencies since the most recent past experience is most likely to give the most accurate estimate of current and prospective overall requirements. On the other hand, it is desirable to maintain a degree of stability, in order to avoid large fluctuations in rates from year to year. A balance between responsiveness and stability is found by using the experience of the two latest available policy years for the determination of the statewide rate level.

Several times during the years since World War II it was necessary, however, to supplement the available policy year experience in order to reflect in the rates more current conditions than are reflected in the policy year data. Automobile liability loss experience is influenced by changes in accident and claim frequencies, as well as changes in average claim costs; the latter reflect not only severity of accidents but also economic fluctuations which may be inflationary or deflationary. If changes in any one of the component parts of the pure premium occur rapidly, reliance upon policy year experience alone would result in rates which would be either inadequate or redundant, whichever the case may be.

In order to measure recent trends in the experience, calendar year average paid claim cost and frequency data are now reviewed by the Bureaus on a continuous basis. Trend and projection factors based upon average paid claim cost data were used particularly during the inflationary period following the outbreak of the Korean War. An example of a method used for the calculation of such factors during that period is included in an appendix to this paper.

The 1956 rate revisions for automobile liability insurance did not utilize trend or projection factors since the available data indicated a levelling off in the trend of average claim cost. The statewide rate level in the private passenger rate revision in New York was based upon the experience of policy years 1953 and 1954, reported as of December 31, 1954 which was the latest experience available at that time. The development of these rate level changes are shown on Exhibit 1.* It will be noted that separate rate level changes are developed on Exhibit 1 for New York City (the three boroughs of Manhattan, Brooklyn and the Bronx) and the balance of the state. Because of the large volume of experience in this state, with almost one third of the premiums in New York City, the city and the balance of the state are treated as separate entities for determination of the overall indicated change. In other states, the overall rate level change is based upon statewide experience.

Before proceeding with the explanation of this exhibit, another feature of the rate making process has to be explained which, at this time, applies only in New York.

It was previously noted that, in the consolidation of the experience (Exhibits A and C), the portion of the losses which is in excess over basic limits is shown separately and that pure premiums and average claim costs are calculated from basic limits losses. Bodily injury incurred losses above $5,000 per claim, or $10,000 for each accident involving two or more claimants, and property damage incurred losses above $5,000 per accident are excluded from the experience used in basic manual rate making. Accidents involving such losses are in the category of catastrophies, the effect of which upon the experience is limited by the exclusion of the excess portion of the loss. In New York State, the volume of experience is large enough to permit the inclusion of bodily injury ϕ losses up to 10/20 limits in the data used for the overall rate level determination without adverse effect upon the stability of the data. Since all insureds in New York carry at least 10/20 limits for bodily injury, it is possible to calculate premiums at 10/20 limits rates, thus maintaining the comparability of premiums and losses. (In states other than New York, where a large proportion of cars are insured at basic limits, this could not be done unless extremely burdensome and impractical additional detail were introduced in the reporting of experience.) Territory rate levels, which will be discussed later in this paper, continue to be based upon 5/10 basic limits, since the experience by territory is of relatively limited volume and, therefore, more subject to fortuitous fluctuations due to large losses.

In order to utilize the experience at 10/20 limits for bodily injury, it was necessary to calculate additional loss development factors and earned factors to be applied to the increments between 5/10 limits and 10/20 limits experience. These factors were calculated in the

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* In states with limited volume, credibility factors are applied to the indicated rate level changes; the complement of credibility is given to the existing rate level.

ϕ Property damage losses in excess of basic limits are of no practical consequence.

same manner as the basic limits earned factor and loss development factor previously described, utilizing the losses between 5/10 and 10/20 limits. The calculation of these factors is shown on Exhibit D. The resulting bodily injury factors were as follows:

Loss Development Factor for the Increment:	1.118
Earned Factor for the Increment:	.409

The average of these factors with the factors for basic limits produced an Earned Factor of .521 to be applied to the bodily injury liability experience at 10/20 limits for policy year 1954.

The proposed rate level changes for New York City and New York State excluding New York City were based upon the comparison of the mean of the "loss ratio at present rates" for policy years 1953-1954 with the "expected loss ratios." The "loss ratio at present rates," i.e. the rates in effect at the time of the rate filing, is the ratio of the incurred losses to the premiums which would have resulted if the rates in effect at the time of the filing had been in effect also during policy years 1953 and 1954. These "premiums at present rates" are shown on Exhibit 1 in column 3 on a written basis and in column 4 on an earned basis (Earned Factors applied to policy year 1954). These premiums were calculated by multiplying the exposures for each class within each territory by the applicable manual rates, for each of the policy years 1953 and 1954. For bodily injury, the premiums thus calculated were increased to 10/20 limits by applying to it the Increased Limits Factor of 1.20.

The losses with which these premiums at present rates are compared are shown in column 5 on Exhibit 1 and the resulting loss ratios in column 6.

The "expected loss ratio" shown in column 8 represents the portion of the premium dollar available for losses (including allocated loss adjustment expenses) after the requirements for expenses, including a stated provision for underwriting profit and contingencies, are met. The expense requirements are determined on the basis of the countrywide expense experience of the members of the National Bureau of Casualty Underwriters, taken from the Insurance Expense Exhibit. Consolidations of the Insurance Expense Exhibits are reviewed periodically and such adjustments in the expense loading are made as are indicated by the expense experience. The provisions for losses and expenses underlying present rates in New York for private passenger cars and commercial cars are as follows:

Item	Percent Distribution of Premium Dollar B.I.	Percent Distribution of Premium Dollar P.D.
Administration	5.37%	5.42%
Inspection, Audit, Bureau	.98	.99
Production Cost Allowance	25.00	25.00
Taxes, Licenses and Fees	4.72	4.00
Unallocated Loss Adjustment	6.00	8.88
Underwriting Profit & Contingencies	3.42	3.45
Total Expenses	45.49	47.74
Losses and Alloc. Loss Adjustment	54.51	52.26
Total	100.00	100.00

In most other states, "standard" provisions for losses and expenses apply as follows:

Item	Percent Distribution of Premium Dollar Bodily Injury and Property Damage
Administration	5.5%
Inspection, Audit, Bureau	1.0
Production Cost Allowance	25.0
Taxes, Licenses & Fees	3.00
Underwriting Profit & Contingencies	5.0
Total	39.5
Losses and All Loss Expense*	60.5
Total	100.0

The indicated and proposed rate level changes on Exhibit 1 are as follows:

New York City	
Bodily Injury	+ 5.7%
Property Damage	+ 0.8

* A provision for unallocated loss adjustment expense is included with the provision for losses and allocated loss adjustment. Correspondingly, unallocated loss adjustment expenses are included with the losses, by applying the following factors to the reported incurred losses including allocated loss adjustment expenses:

B.I.	1.11
P.D.	1.17

The above factors are obtained from a supplement to the Insurance Expense Exhibit requiring the separate reporting of allocated and unallocated loss adjustment expenses.

Balance of N. Y. State	
Bodily Injury	+7.1%
Property Damage	+2.8

As a matter of information, there are also shown on Exhibit 1 the rate level changes for both coverages combined, and [footnote (b)] the statewide rate level changes.

DEVELOPMENT OF RATE LEVEL CHANGES BY TERRITORY

The rate level changes by territory are developed from the experience of all private passenger classifications combined. Basically, the rate level change in each territory is determined by comparing the average of the existing rates with the average rate indicated by the experience.

As noted above, New York City is treated as a separate entity. Although it consists of 3 statistical territories for which experience is compiled separately, the 3 statistical territories are traditionally combined into one rate territory.

The balance of the state consists of a number of statistical territories for which rates are developed in accordance with each territory's experience indications within the overall rate level change determined for all these territories combined. In this process of apportioning the overall rate level change among the territories, the influence of chance fluctuations due to the small volume of experience by territory is reduced through the use of a longer experience period than is used for the statewide rate level. In the latest New York rate revision for private passenger cars, the experience of the latest 3 years (policy years 1952-1954) was used for territory rate level determination. In states other than New York, and for other classifications in New York as well as in other states (commercial cars, garages, etc.) the experience of the latest five policy years is generally used for territory rate levels. Exhibit 2 shows the development of rate level changes by territory; sheets 1 and 2 present the calculations for bodily injury, sheets 3 and 4 for property damage. The filing contained also a sheet of explanatory notes. This sheet is not included in this paper since the exhibit will be explained in greater detail below.

Column (1) lists all statistical territories for New York State (excluding New York City). The number preceding the city or county name is the statistical territory number; the number following the name designates the rate territory for the city or county in the Automobile Casualty Manual.

Column (2) is explained by its heading.

Column (3) shows the average manual private passenger rate for each territory in effect at the time of the rate filing. The average rate is obtained by weighing the manual rate for each class by the number of cars written for the class in the territory, using the distribution for the latest available policy year. For example, if there are 3 rate classes, the average rate is computed as follows:

(1) Class	*(2)* Number of Written Cars	*(3)* Manual Rate	*(4)* (2) x (3)
1	3880	$35.00	$135,800
2	620	57.50	35,650
3	500	50.00	25,000
Total	5000	$39.29	$196,450

Dividing the total in column (4) by the total in column (2) above produces an average rate of $39.29. It will be noted that column (4) above produces the premiums at manual rates, based upon the distribution by class for the latest policy year. The sum of the premium at manual rates for all territories produces the statewide premium at manual rates referred to earlier in connection with the calculation of the statewide rate level.

The calculation of the average manual rates in the latest New York rate revision had to take into account two additional features not reflected in the above example.

1. The Preferred Risk Rating Plan in effect for private passenger cars in New York.
2. Changes in the private passenger classifications subsequent to 1954.

Under the Preferred Risk Rating Plan, cars are rated at the rates shown on the manual rate pages if the named insured was not involved in more than one accident involving property damage only; other cars are subject to surcharges of 10% or 20% depending upon their accident record during a period of 18 months prior to the effective date of the policy. The experience for policy year 1954 was reported in detail by these surcharge classes within each rate class:

A — No surcharge
B — 10% surcharge
C — 20% surchage

These surcharges were reflected in the calculation of premiums at manual rates and the resulting average rates shown in Column (3) of Exhibit 2.

Changes in the private passenger classifications will be explained in greater detail later on. For the calculation of average rates in Column (3) the following is noted: Experience for policy year 1954 was reported by the classifications in effect for most of that year, classes 1, 2 and 3. The manual rates in effect at the time of the rate filing were on the basis of a classification system which was a refinement of the 3 class plan, with 3 subclasses for class 1 and 2 subclasses for class 2. In order to be able to apply the rates for these subclasses to the exposures reported for policy year 1954 by the major classes then in effect, it was necessary to calculate averages of the rates for classes 1A, 1B and 1C, and for classes 2A and 2C, respectively. These average rates were calculated by first obtaining the percent distribution of cars for the subclasses 1 and 2 and then weighing the manual rates for the subclasses in each territory by their respective exposure distribution. The exposure distribution was obtained from reports of exposures and premiums by class and territory for the first quarter of policy year 1955*.

No useful purpose would be served by going into more detail with respect to the calculations which were necessary to reflect in the average rates these special conditions affecting the recent New York rate revision. The example previously shown explains the calculation of the average rate (and the premium at manual rates) under ordinary circumstances. It will be noted, however, that exceptions from the ordinary occur, and that such adjustments in the standard procedure have to be made as are indicated by the circumstances.

Column (4) presents, for each territory, the experience pure premium for policy years 1952-1954 combined. Although it is generally understood that pure premiums are calculated from basic (5/10/5) limits experience, this fact is specifically noted in the column heading for bodily injury liability in order to distinguish clearly between the 5/10 limits experience used for territory rate level development and the 10/20 limits experience used for statewide bodily injury rate level determination.

Column (5) presents the pure premiums underlying the manual rates (commonly referred to as "Underlying Pure Premium") which is the loss portion of the manual rates in effect at the time of review. The underlying pure premiums are calculated by multiplying the average rates in Column (3) by the expected loss ratio. As previously noted, the expected loss ratios in New York are now .5451 for bodily injury and .5226 for property damage liability.

The experience pure premiums and the underlying pure premiums will produce the formula pure premiums in column (9) by a process of weighting which will be explained later. First, however, the pure premiums in columns (4) and (5) are adjusted in columns (6) and (7) as follows:

Column (6): The experience pure premium in column (4) is adjusted to the proposed statewide (in New York—statewide excluding New York City) rate level on 1954 distribution. This adjustment is made

* Companies report written exposures and written premiums for private passenger and commercial cars by class and territory and policy year for each accounting quarter 60 days after the end of each quarter as part of the regular reporting procedure.

by applying to each of the experience pure premiums* in column (4) a factor determined as follows:

$$\frac{\text{Grand Total Column (2) x Grand Total Column (7)}}{\text{Sum of Col. (2) x Col. (4) } \textit{for each territory}}$$

The grand total in column (2) is the statewide (excluding N. Y. C.) total number of written cars for policy year 1954. The grand total in column (7) is the statewide (excluding N. Y. C.) proposed pure premium. Since the product of exposure and pure premium is equal to losses, the numerator in the fraction represents the number of dollars required for losses on the basis of the indicated statewide rate level. The denominator in the above fraction represents the aggregate number of loss dollars which would be reproduced by the pure premiums in column (4) if the business is distributed by territory as shown in column (2), which represents the exposure distribution for the latest policy year. Thus, the same distribution is reflected in the aggregate (statewide excluding N. Y. C.) experience pure premium as in the statewide (excluding N. Y. C.) proposed pure premium. The difference in the loss levels reflected in the numerator and denominator is the difference in the loss experience of the 2 year period used for statewide (excluding N. Y. C.) rate level and the loss experience of the period used for territory rate level. For bodily injury, it also reflects the difference between the 10/20 limits and the 5/10 limits experience used respectively for statewide and territory rate level determination in New York. The formula described above produced the following factors in the New York rate revision:

B.I.	1.0147
P.D.	1.0121

As noted above, these factors were applied to the experience pure premium in column (4) for bodily injury and property damage respectively, to produce the pure premiums in column (6).

Column (7) shows the underlying pure premiums adjusted to the proposed statewide (excluding N. Y. C.) rate level. No adjustment to the 1954 distribution is needed since the statewide (excluding N. Y. C.) average underlying pure premium was calculated from the 1954 distribution of exposures by territory. The adjustment to the proposed rate level is made by applying to each of the territory underlying pure premiums the "rate level factors" (1.000 + proposed percent change):

B.I.	1.071
P.D.	1.028

Column (8) shows the credibility assigned to each territory on the basis of its number of claims incurred during the experience period

* For combined territories, the average pure premium of the combination.

used in column (4). (Policy years 1952-1954 in this revision.) Through the application of credibility factors the credence given to the experience is expressed in numerical values. Thus, if full credence is given to the experience a credibility factor of 1.00 is applied, and factors below 1.00 are applied for less than full credence. The criterion upon which credibility is based is volume of experience. For liability insurance, number of claims has been used for many years as the measure of volume for the determination of credibility. For the automobile line of insurance full credibility is assigned to a volume producing 1084 claims or more during the experience period. The following table is used for the assignment of credibilities below 1.00.

Number of Claims	*Credibility*
0- 10	0
11- 42	.10
43- 97	.20
98- 172	.30
173- 270	.40
271- 389	.50
390- 530	.60
531- 693	.70
694- 877	.80
878-1083	.90
1084 and over	1.00

Territory Combinations. It seems appropriate at this point to comment on territory combinations before proceeding with the explanation of column (9). There are no rules or formulae from which it may be determined whether the experience for certain territories should be combined or used separately. The making of combinations is a matter of informed judgment. In combining territories for the development of a common schedule of rates, recognition may be given to such factors as: Geographic proximity and flow of traffic from one territory to the other; similarity of pure premiums of two or more territories, with slight fluctuations from year to year, e.g. of two territories, one may have a higher pure premium for two of five years, and a lower pure premium for the remaining three years; an apparent trend in the pure premium of two or more territories to converge during the more recent years, which is not yet fully reflected in the average pure premium for the experience period used.

Column (9): The "Formula Pure Premium" in column (9) is the proposed pure premium, i.e. the loss portion of the proposed average rate. The formula pure premium is the weighted average of the 1952-1954 mean experience pure premium and the underlying pure premium, both adjusted to reproduce the proposed statewide rate level. The weight applied to the experience pure premium is the credibility factor in column (8), and the complement of the credibility factor is the weight applied to the underlying pure premium:

Col. (6) x Col. (8) + Col. (7) x [1.0 — Col. (8)]

From the above it can be seen that the experience pure premium (adjusted) becomes the proposed pure premium for any territory which is assigned full credibility; if there were any territories with zero credibility*, the proposed pure premium would be the underlying pure premium adjusted to the proposed statewide (excluding N. Y. C.) rate level, so that such territory would receive the rate level change indicated by the statewide (excluding N. Y. C.) experience. For territories with credibilities between 0 and 1.00, the formula pure premium reflects the territory's own indication to the extent of its credibility, with the complement of the weight given to the indication of the statewide experience.

The formula pure premium in column (9) should reproduce in the aggregate the proposed statewide pure premium. The statewide average formula pure premium is determined by weighting the territory formula pure premiums by their respective written exposures. [Sum of Col. (2) x Col. (9) divided by grand total column (2)]. The introduction of credibility may cause the statewide average formula pure premium to depart from the proposed statewide pure premium. Usually, a small departure of not more than one percent is acceptable. Otherwise, an adjustment factor is applied to the formula pure premiums. No such adjustment factor was needed in Exhibit 2, since the formula pure premiums reproduced the proposed pure premiums within one tenth of one percent for B.I. ($28.96 \div 29.00 = .999$) and exactly for P.D.

Column (10) shows the percent change in rate level for each territory determined from a comparison of the proposed pure premium in column (9) with the pure premium underlying the rates in effect at the time of the filing as shown in column (5). The final rates for each territory are usually calculated from these proposed percent changes by applying the percent change for each territory to the respective private passenger class 3 rate; the rates for the other private passenger classes have a fixed relationship to the class 3 rate and are determined by applying to the class 3 rate the differentials expressing this relationship. In the 1956 private passenger rate revision in New York and other states, the relativity between classes was also revised. This change in classification relativities produced an increase which would have created an off-balance in the proposed rate level. In order to correct for this off-balance, so that the developed rates for all classes will reproduce the proposed average rate in each territory, correction factors were applied. The calculation of these correction factors will be explained in connection with the following section dealing with private passenger classifications.

* This is of no practical application for the major subdivisions of automobile liability. "Non-credibility classes" are frequently found in General Liability Insurance.

Column (11) shows the percent changes of column (10) after the application of the off-balance correction factor referred to above.

PRIVATE PASSENGER CLASSIFICATIONS AND DIFFERENTIALS

Reference was made in earlier parts of this paper to private passenger classifications and differentials. For a fuller understanding of the rate making process outlined above and the subsequent steps yet to be discussed, a review of the private passenger classification system in use for the past few years is in order.

During 1953 the National Bureau and Mutual Bureau introduced revised private passenger classifications in most states. In several states, these revisions were introduced during 1954—in September, 1954 in New York. These revised classifications represented a refinement of the classification plan then in effect under which private passenger cars were classified on the basis of use and the age of the operator of the automobile as follows:

Class 1—No business use, no operator under 25 years of age.

Class 2—Operator under 25 years of age—business and non-business use.

Class 3—Individually owned cars—business use—no operator under 25 years of age, and all corporate owned cars.

The bodily injury and property damage liability rates for private passenger cars reflected generally the following relationship.

Class	*Differential to Class 3*
1	.70*
2	1.15*
3	1.00

In 1953, refined classifications were established, providing for subdivisions within classes 1 and 2, but maintaining the major classes of the 3 class plan. The Mutual Bureau first introduced refined classifications in a number of western and midwestern states in May, 1953. Under that plan, major class 1 was subdivided into 2 classes, 1A and 1B, based upon the annual estimated mileage and number of operators; class 2 was divided into 3 subclasses 2A, 2B and 2C, based upon ownership, marital status and extent of operation of the automobile with respect to the drivers under 25 years of age. Subsequently, the National Bureau and the Mutual Bureau introduced a classification plan under which class 1 was divided into 3 subclasses 1A, 1B and 1C, based upon use of the automobile in going to and from work, and the mileage driven in such use; class 2 was divided into 3 subclasses 2A,

* Rates for cars owned by farmers were subject to a 15% reduction from the otherwise applicable rates. In New York, the differential for class 2 was 1.15 in New York City and 1.20 for the Balance of the State.

2B and 2C on the basis of the same principles used in the Mutual Bureau 6 class plan set forth above. This 7 class plan was developed by the National Bureau for introduction in all states, and by the Mutual Bureau for introduction in the states under its jurisdiction with the exception of the states in which the 6 class plan was already in effect.

Rates for the newly established classifications reflected differentials based upon judgment arrived at after an exhaustive study of the private passenger rating situation throughout the country. These differentials were as follows:

	Differential to Class 3	
Class	*6 Class Plan*	*7 Class Plan***
1A	.55	.60
1B	.70	.70ϕ
1C	*	.85

	Differential to Class 3	
Class	*6 Class Plan*	*7 Class Plan*
2A	1.05	1.10
2B	1.25	1.25
2C	1.50	1.50
3	1.00	1.00

Under both plans, a discount for cars owned by farmers was continued. (A classification symbol F was adopted for identification of the farmers rate class.)

The introduction of these revised classifications and differentials had the overall effect of a rate level reduction since reduced differentials outweighed increased differentials in terms of total premiums. In some states, the revised differentials were applied to the then existing class 3 rates which were maintained. This resulted in an overall reduction in rate level in those states. In other states, including New York, the plan was introduced on a balanced basis, which required the application of a balancing increase to the existing class 3 rates,

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* Not applicable.

** For New York City, the experience under the 3 class plan indicated a higher differential for class 1 than was indicated for the balance of New York State and other states. Accordingly, differentials of .68, .73 and .79 were introduced for New York City.

ϕ Class 1B rates in small city and rural rate territories were determined as .60 of the class 3 rate plus $3 for bodily injury and property damage combined. Small city and rural rate territories are generally territories in which no city has a population of over 40,000. The availability of public transportation was a criterion in establishing the dividing line.

in addition to any rate level change indicated by the then available experience.

The classification plan was modified in February 1955 as follows:

A differential of .60 was adopted for class 1B in small city and rural territories.

A new class 2D was established applicable to cars subject to classes 2A or 2B, if all operators under 25 years of age are female, with a differential of .85.

Class 2B was combined with class 2A, with the new class 2A applicable to male underage operators only.

A "driver training discount" of 10% was introduced, granted to cars classified as 2A, 2C or 2D, if all underage operators provide proof of successful completion of an accredited driver training course meeting stated minimum requirements.

A further change was introduced in February 1956, when class 2D was discontinued, and class 2C was re-defined to be applicable only if the insured automobile is owned or principally operated by a male driver under 25 years of age. Henceforth, the age of female operators is not a rating criterion.

These changes in the private passenger classifications required adjustments in the classification experience for policy year 1954, before this experience could be utilized for a review of indicated classification differentials. Such review was made late in 1955, and resulted in a revision of the private passenger differentials which was included in the 1956 private passenger rate revisions in most states, including New York. These revisions of differentials were based upon the combined classification experience of the National Bureau and the Mutual Bureau for all states where the 7 class plan was in effect during the entire year 1954. A summary of this experience is shown on the attached Exhibit 3. Since coding by the revised classifications in New York started with January 1, 1955, Exhibit 3 does not include any New York experience*. As experience becomes available for subsequent years, it will be possible to include additional states in the experience used for classification review. It is desirable to base such review upon the broadest possible basis of experience for the development of countrywide uniform differentials in order to minimize chance fluctuations in the differentials from state to state, and from year to year in the same state.

The following is with respect to the summary of the classification experience shown on Exhibit 3:

The data are shown by the rate classes in effect at the time of the revision, adjusted for changes in the rating system since 1954.

* Exhibit 3 includes the National Bureau experience in 26 states and the Mutual Bureau experience in 22 states. The states of California, Idaho, Missouri and Montana are not included for the Mutual Bureau since it does not function as a rating organization in these 4 states.

The experience was segregated not only for class 1B between large city territories and small city territories, for which the differentials prior to the revision varied, but also for all other classes.

Basic limits loss and loss adjustment ratios are shown for each class based upon the basic limits losses of the class (including all claim expenses) and premiums at manual class 3 rates. (The rates of the Mutual Bureau and National Bureau vary in the states in which the two Bureaus do not cooperate. The same differentials, however, are reflected in the rates of both Bureaus in all states included in the experience on Exhibit 3. For the purpose of this exhibit, National Bureau rates were applied. Since these loss ratios are used for relativity review only, it is immaterial what level of rates is used, as long as the distribution of exposures by class of either Bureau does not vary significantly.)

From these loss ratios, indicated differentials were calculated for each class from the relationship of the loss ratio of the class to the class 3 loss ratio. Thus, for class 1A, large city territories, the experience shows that if all class 1A had been written at class 3 rates a loss ratio of .392 would have resulted. Since the loss ratio for class 3 is .579, the indicated differential is .68 (.392 ÷ .579 = .68). At this indicated differential, class 1A would produce the same loss ratio as class 3.

For the calculation of indicated differentials for classes 2A and 2C adjustments were required based upon the assumption set forth in note (1) on Exhibit 3, and the following assumption as to expected exposure distribution:

Present Class 2A = 70% of former class 2A + 75% of former class 2B = 71% of combined 2A and 2B

Present Class 2C = 80% of former class 2C

The differential indications were developed from the experience for bodily injury and property damage combined, although the experience was also reviewed for each coverage separately. Uniform differentials for both coverages were decided upon, since the indications for each coverage separately did not seem to warrant a departure from past practice.

The breakdown of the experience into large city and small city territories revealed significant differences in the indicated differentials for the two types of territories. This was found to be consistent with the results of other studies which point in the same direction*.

The proposed differentials are shown in the last column of Exhibit 3. They were selected from the indicated differentials by making adjustments in the direction of the indications without going to the full extent of the indications. Thus, judgment was superimposed on the experience results in order to temper the changes in differentials. For New York City, separate differentials were selected for classes 1A,

* Experience on commercial cars also indicates a narrower range in the differentials for large cities than for other territories.

1B and 1C, because of the significant difference of the exposure distribution and the overall indication for major class 1 for New York City compared with the other territories. The proposed differentials for New York City are shown on Exhibit 3 (a).

Exhibit 3 (a) also presents the calculation of the effect on rate level due to the introduction of the revised differentials, for New York City and the balance of New York State. The percent change is calculated by comparing the average of the proposed differentials for all classes with the average of the differentials in effect before the revision. The average was obtained by weighing the differential for each class by the respective percent exposure distribution. This calculation provided the basis for the adjustment of the proposed territory percent change in Exhibit 2 referred to in the preceding section. The following example will illustrate this adjustment.

The proposed rate level change for Monticello, bodily injury is +14.3% (Exhibit 2, Sheet 1, first line.) The Monticello territory is in the group of small city territories, for which the effect of the revised differentials is a rate level change of +2.5%. The percent change for class 3 in this territory is, therefore, $1.143 \div 1.025 = 1.116$ or + 11.6%.

No correction was made in this revision for the off-balance in level due to the 10% driver training credit on class 2A and 2C risks, and for the 25% discount introduced in November 1955 for multicar risks. The effect of the driver training discount is estimated to be very small, and no provision has been made for the reporting of data from which the effect may be calculated. Separate experience will be available in the future on multicar risks subject to the 25% discount, at which time the discount will be reflected in the premium at manual rates.

Development of Classification Rates

PRIVATE PASSENGER CARS

The proposed rates for class 3 were determined as follows:

(1) For New York City, by applying to the class 3 rates in effect at the time of the revision the proposed rate level changes shown on Exhibit 1 modified by the off-balance shown on Exhibit 3 (a).

(2) For other territories, by applying to the class 3 rates in effect at the time of the revision the percent changes shown in column (11) of Exhibit 2.

The class 3 rates so developed were rounded to the nearest dollar. The proposed rates for the remaining classes were obtained by applying the proposed differentials to the proposed class 3 rates and rounding the results to the nearest dollar.

CLASSIFICATIONS RELATED TO PRIVATE PASSENGER RATES

Automobile liability insurance rates are developed in relationship to private passenger rates for certain classifications having an exposure hazard which can be related to that of private passenger cars. These relativities are usually determined from countrywide experience and are reviewed periodically, at less frequent intervals than are common for the major classification groups.

*School Buses**

Rates for school buses are determined by applying the following ratios to the private passenger class 3 rates:

School Bus Type	*Ratios to Private Passenger Class 3 Rates*
Private Passenger	1.00
Commercial or Bus	
0—30 passenger	.90
31—60 passenger	1.10
over 60 passenger	1.30

*Funeral Cars**

Rates for Funeral cars are 110% of the private passenger class 3 rates for bodily injury, and equal to the private passenger class 3 rates for property damage.

Hired Cars

Rates for private passenger hired cars are 2% of the private passenger class 3 rate, rounded to the nearest five cents.

Non-ownership Class 1

The rates for this class are determined as 7% of the private passenger Class 3 rates, rounded to the nearest fifty cents for both bodily injury and property damage and subject to a minimum rate of $2.00 for bodily injury and $1.00 for property damage. (Rates for non-ownership class 2 are uniform countrywide.) In the last New York rate revision, no changes were made in the Hired Car rates and the rates for non-ownership Class 1, so that the present rates do not reflect the above relationships.

The rate filing includes an exhibit showing the proposed rates for every territory for the classes under review. As an illustration, there is attached one page of the exhibit of proposed rates (Exhibit 4, Sheet 2) from the 1956 New York rate revision. This revision was accepted by the New York Insurance Department and the revised rates became effective June 27, 1956 as filed with only minor modifications reflecting limitations on some of the rate increases.

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* Because the volume of experience on school buses and funeral cars for New York City is not as sparse as for other territories, it has been customary to develop rates for these classifications for New York City from their own experience in that territory. In the last revision, no change was made in the rates for these classifications for New York City.

Commercial Cars and Garages

The rate making procedure for commercial cars and garages is basically the same as that for private passenger cars; the detail in which experience is compiled for these classifications requires, however, certain modifications in the process which are explained below.

Commercial Cars

In the discussion of the experience calls it was noted that the experience on commercial non-fleets is reported in the same manner as private passenger automobile experience, while commercial fleets are not reported for the incomplete policy year, but only for the policy year as of 24 months and as of 36 months. The experience for the latest available two policy years, therefore, consists of fleet and non-fleet experience for the older of the two policy years, and only non-fleet experience for the latest year. The statewide rate level is determined from the mean of the loss ratios at manual rates for the two policy years, giving equal weight to the indications of each year, although the volume of experience is quite different for each of the two years. On a broad countrywide basis, the volume of commercial fleets is about equal to that of non-fleets so that the older of the two years represents approximately twice the volume of that for the latest year.

The premium at manual rates is determined by extending the written exposures in each territory for each class by the respective manual rates, for commercial rate classes 3, 4 and 5. (Commercial rate classes 7 and 8 were established in 1955, and no experience was yet available for these classes during 1956. Class 6 is treated separately, as will be explained later on.)

For commercial fleets, the written exposures are adjusted to reflect the Automobile Fleet Plan Reduction Percentages based on size of fleets. (See Manual Rule 72.) Average "Fleet Discounts" are determined for each state periodically from calls issued by the National Bureau of Casualty Underwriters and the Mutual Insurance Rating Bureau from which the fleet adjustment factors are obtained. Thus, the exposures on commercial fleets reflect the same reduction as is reflected in the actual premium charged to fleet risks.

Territory relativities for commercial cars are determined in the same manner as for private passenger cars.

Classification relativities for commercial cars have two component parts:

1. The assignment of commercial use classifications to rate classes.
2. The relativities of the rate classes to each other.

The commercial section of the Automobile Casualty Manual enumerates the various commercial use classifications, indicating for each of these the applicable rate class. The assignment of these use classifications to rate classes was last reviewed and revised by the National Bureau and Mutual Bureau during 1955 based upon the experience by use classifications for policy years 1946-1949. Experience in use classification detail is compiled on a periodic, discontinuous basis; companies are required to record and report this detail for a number of years, after which the detail is reduced to reporting by rate class within statistical territory. Such a period of reduced detail of reporting were the years 1950-1955; effective January 1, 1956, companies resumed the reporting of commercial fleet and non-fleet experience in complete detail by use classification within statistical territory.

The relativities between commercial rate classes were revised in most states during 1956, in connection with a countrywide program of the National Bureau and the Mutual Bureau. In the states in which no rate revision for commercial cars was introduced during 1956, the rate class relativities will be revised in connection with the next rate revision. For the purpose of determining indicated rate class differentials for commercial cars, the combined countrywide* experience of the National Bureau and Mutual Bureau for policy years 1950-1953 was utilized. Loss and loss adjustment ratios at manual class 5CA rates were determined for each rate class, and the indicated differentials were expressed as ratios to Class 5CA, which is the commercial car rate class producing the largest volume. The experience indications are shown on the attached Exhibit 5, Sheets 1 and 2, separately for major cities and the balance of the country; (the experience for New York City was reviewed separately, but is not included here).

The revised differentials and their derivation are shown on the attached Exhibit 5, Sheet 3, for classes 3, 4 and 5, CA and CB. In this first review of commercial car rate class differentials in a number of years, a formula was utilized which produced differential changes in the direction of the indications without creating extreme fluctuations in the resulting rates.

For classes 7 and 8, the differentials were continued which were used at the time these rate classes were established in 1955.

Rates for class 6 had been determined in the past as the lower of the private passenger class 3 rates and the commercial class 5CA rates. A new relationship was introduced at 15% below the rates for class 8CA. In view of the generally favorable experience on class 6, however, this formula is not applied where its application would result in an increase of existing class 6 rates.

GARAGES

The Garage Liability Policy affords broad coverage for all premises and operation exposures of the garage, including Product Liability and Defective Workmanship coverage; under Division 1 of the policy, coverage is included for the automobile liability exposure of all automobiles owned by the garage as well as non-owned automobiles; under Division 2, automobiles owned by the garage are not covered.

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* This experience included all states in which the reassignment of use classifications to rate class, referred to above, was introduced.

Manual rates apply separately for Division 1 and Division 2. For both, the basis of exposure is the garage payroll. For Division 1, there are three payroll classes, viz.

Class (a)—clerical office employees

Class (b)—proprietors, partners, officers, salesmen, general managers, service managers and chauffeurs

Class (c)—all other employees

Rate making data for Garages—Division 1 are reported for all payroll classes combined for each statistical territory. In order to calculate premiums at manual rates, an average rate for the three payroll classes has to be calculated for each statistical territory which is applied to the written exposures for the three classes combined. This average rate, at present, is determined from the distribution of exposures by payroll class which was last obtained for policy year 1950. A typical distribution of payroll by class, and the calculation of the average rate, is shown below for a statistical territory:

Payroll Class	*Written Exposures*	*Present Rate*		*Premium at Present Rate*
Non-Minimum Premium Policies				
a	549,734	$ .12	discounted rate*	$ 670
b	1,604,983	1.50		24,075
c	4,401,847	.48		21,129
Minimum Premium Policies				
a	—	.13	manual rateφ	—
b	40,494	1.66		672
c	32,757	.53		174
Total	6,629,815	.79		46,720

The Automobile Bodily Injury and Property Damage Liability Statistical Plan requires, effective January 1, 1956, the separate reporting of experience for Garages—Division 1 by industry classification as follows:

* Manual rates are adjusted to reflect the premium reduction based on size of payroll, (Manual Rule 52) in a manner similar to that used for Commercial Fleets.

φ Premium reduction based on size of payroll not applicable. Incurred losses are not reported by payroll class so that the propriety of the class relativities can not be tested against actual loss experience. Rate review is directed, at the present time, at the review of statewide and territory rate levels. The review of rate relativities by payroll class would require that each loss is assigned to the payroll class causing the loss; it is believed that such classification of losses could not be accomplished with any degree of accuracy because of the nature of garage operations.

Franchised Dealers (Sales Agencies)
Non-Franchised Dealers (Sales Agencies)
Repair Shops
Service Stations
Storage Garages and Public Parking Places
Equipment and Implement Dealers

When experience in this detail becomes available, beginning with the 1958 Call for experience, it will be analyzed for significant differences in the rate indications for each of these industry classifications. The National Bureau and the Mutual Bureau are also obtaining new distributional data on exposures by payroll class under a special call beginning with January 1, 1957. Since these distributions will be reported by the industry classifications referred to above, substantially more statistical detail will be available for analysis of garage liability experience than had been available in the past.

CONCLUSION

The foregoing description of current rate making procedures for automobile liability insurance dealt primarily with the mechanics of rate making. The subject was presented in an elementary fashion; an attempt was made to explain terms and procedures in such manner that they can be understood without prior knowledge of the subject. A considerable portion of this paper was devoted to the source from which the material used in rate making flows: the statistical plan and calls for experience.

In the course of this presentation, when the opportunity offered itself, attention was called to the utilization of judgment in rate making. Although this paper deals basically with the formula approach, which in fact is extensively used in rate making, sight should not be lost of the role judgment plays, which is superimposed upon and sometimes used in lieu of the formula. The determination of the appropriate method of rate making under any given set of circumstances must ultimately be governed by the requirement of the rating laws which prescribe that rates shall be adequate, not excessive and not unfairly discriminatory.

MUTUAL INSURANCE RATING BUREAU

☒ AUTOMOBILE LIABILITY INSURANCE EXPERIENCE

19 55 CALL FOR

☐ GENERAL LIABILITY INSURANCE EXPERIENCE

STATE OF NEW YORK STATE (EXCL. N. Y. CITY)

ITEM 1 PRIVATE PASSENGER BY NON FLEET BY STATISTICAL TERRITORY BY CLASSIFICATION

EXHIBIT A

MEMBERS & SUBSCRIBERS

				ITEM	TERRITORY		CLASS	POLICY YEAR	WRITTEN EXPOSURE		WRITTEN PREMIUM (a)	LOSSES INCURRED (b)		NO. OF CLAIMS INCURRED		EXCESS LOSSES (EXCESS PORTION)	
												LIABILITY	MEDICAL *	LIABILITY	MEDICAL *	LIABILITY	MEDICAL *
									CAR YEARS & TENTHS OF CAR YEARS								
5	1		1	01	31	01	1000	1953	19	2	1376	604		1			
5	1		1	01	31	01	1005	1953	2	0	150						
5	1		1	01	31	01	1111	1953	3870	6	300520	112453	297	141	5	11850	
5	1		1	01	31	01	1112	1953	5825	1	508388	204711	20423	206	131	18549	1044
5	1		1	01	31	01	1121	1953	72	6	6137	298		2			
5	1		1	01	31	01	1122	1953	111	9	10850	2333	227	5	3		
5	1		1	01	31	01	1130	1953	4	0	355						
5	1		1	01	31	01	1131	1953	4	6	440						
5	1		1	01	31	01	1132	1953	12	2	1246	23802	1000	2	2	12500	
5	1		1	01	31	01	1200	1953	7	2	652	9350		3			
5	1		1	01	31	01	1211	1953	513	9	64038	46587		37		5000	
5	1		1	01	31	01	1212	1953	569	6	79019	56324	3005	51	25	10000	
5	1		1	01	31	01	1221	1953	6	2	912						
5	1		1	01	31	01	1222	1953	16	3	2368	2483	915	2	6		
5	1		1	01	31	01		1953									
5	1		1	01	31	01	1232	1953	3	9	665						
5	1		1	01	31	01	1300	1953	37	1	2612	60					
5	1		1	01	31	01	1311	1953	361	2	43710	3202	11	8	1		
5	1		1	01	31	01	1312	1953	515	5	67127	14360	777	24	12		
5	1		1	01	31	01	1321	1953	7	4	1041						
5	1		1	01	31	01	1322	1953	13	5	1765	8					
5	1		1	01	31	01	1332	1953	4	0	796	18575	1900	2	4	10000	500
5	1		1	01	31	01	1430	1953	2	7	282	19					
5	1		1	01	31	01	1500	1953	8	2	982	270	40	2	1		
5	1		1	01	31	01	1611	1953	59	0	3759	1037		2			
5	1		1	01	31	01	1612	1953	86	6	6493	3285	-506	2	3		
5	1		1	01	31	01	1622	1953	1	0	104						
5	1		1	01	31	01	1711	1953	10	5	1143	5919		5			
5	1		1	01	31	01	1712	1953	14	7	1783						
									12160	7	1108713	505680	29101	495	193	67899	1544
5	1		1	01	31	08	1000	1953	66	7	3914	14080		4		2500	
5	1		1	01	31	08	1005	1953	2	0	65						
5	1		1	01	31	08	1111	1953	12273	4	706237	300654	3084	351	13	13614	
5	1		1	01	31	08	1112	1953	12195	0	782136	265500	32872	307	272	32211	622
5	1		1	01	31	08	1121	1953	203	3	12942	8344	1272	10	4		
5	1		1	01	31	08	1122	1953	197	1	14002	2295		6			
5	1		1	01	31	08	1130	1953	11	2	874	2016		5			
5	1		1	01	31	08	1131	1953	21	7	1464						
5	1		1	01	31	08	1132	1953	22	7	1837						
5	1		1	01	31	08	1200	1953	29	5	2483	2048		9			
5	1		1	01	31	08	1211	1953	2099	8	196910	96039	20	143	1	3333	
5	1		1	01	31	08	1212	1953	1269	5	134406	32421	3249	63	28		CR 500
5	1		1	01	31	08	1221	1953	20	4	2099	781		2			
5	1		1	01	31	08	1222	1953	40	8	4838						
5	1		1	01	31	08	1231	1953	5	3	393						

(a) WRITTEN PREMIUMS INCLUDE CHARGE FOR EXCESS LIMITS.
(b) LOSSES INCURRED INCLUDE EXCESS LOSSES AND ALLOCATED CLAIM EXPENSES.
* MEDICAL PAYMENTS COVERAGE.

Exhibit 8
Sheet 1

Mutual Insurance
Rating Bureau

PENNSYLVANIA AUTOMOBILE LIABILITY

Calculation of Earned Factors to Apply to Written Exposures and Premiums
for Policy Year 1954 as of December 31, 1954

All Companies Reporting to M.I.R.B. | Private Passenger Cars - Statewide

Policy Year	Written Exposure as of 12 Mos.∮	Written Exposure as of 24 Mos.	Basic Limits Losses Incurred* as of 12 Mos.	Basic Limits Losses Incurred* as of 24 Mos.**	No. Claims Incurred as of 12 Mos.	No. Claims Incurred as of 24 Mos.*	Pure Prem. as of 12 Mos.	Pure Prem. as of 24 Mos.*	Claim Freq. as of 12 Mos.	Claim Freq. as of 24 Mos.*	Pure Prem. Ratios 12 Mos. to 24 Mos. (SPP)	Cl. Freq. Ratios 12 Mos. to 24 Mos. (SF)
						Bodily Injury						
1951	270,079	270,858	1,400,809	2,524,313	2,822	4,858	5.22	9.32	1.04	1.79	.560	.581
1952	288,140	289,196	1,626,681	3,187,287	3,282	5,102	5.65	11.02	1.14	1.76	.513	.648
1953	224,839	226,997	1,362,502	2,490,022	2,342	3,949	6.06	10.93	1.04	1.74	.554	.598
Mean											.542	.609
						Property Damage						
1951	269,998	270,600	1,301,870	2,386,067	15,507	27,019	4.82	8.82	5.74	9.98	.546	.575
1952	288,047	289,099	1,562,036	2,537,877	17,157	27,016	5.42	8.78	5.95	9.34	.617	.637
1953	224,691	226,815	1,206,661	1,994,001	12,157	19,978	5.37	8.79	5.41	8.81	.611	.614
Mean											.591	.609

Formula∮ Earned Factor for Annual Policies $= SF \times V \times \left\{\frac{SPP}{SF} \times V + \frac{CWPP}{CWF} \times (1.0 - V)\right\} + CWPP \times (1.0 - V)$

B.I. $.609 \times .90 \times \left\{\frac{.542}{.609} \times .90 + \frac{.573}{.609} \times .10\right\} + .573 \times .10 = .55$

P.D. $.609 \times 1.00 \times \left\{\frac{.591}{.609} \times 1.00 + 0\right\} + 0 \qquad = .59$

* Including allocated loss adjustment expenses.
** Policy year 1951 and 1952 bodily injury losses are as of 36 months.
∮ See Sheet 2 for explanations of symbols.

Mutual Insurance
Rating Bureau

Exhibit B
Sheet 2

AUTOMOBILE LIABILITY INSURANCE

Calculation of Countrywide Pure Premium and Claim Frequency Ratios
Based upon Policy Year 1952

All Companies Reporting to M.I.R.B. — Private Passenger Cars - Countrywide

Written Exposure (1) as of 12 Mos.	Written Exposure (2) as of 24 Mos.	Basic Limits Losses Incurred (3) as of 12 Mos.	Basic Limits Losses Incurred (4) as of 24 Mos.	No. of Claims (5) as of 12 Mos.	No. of Claims (6) as of 24 Mos.	Pure Premium (7) as of 12 Mos.	Pure Premium (8) as of 24 Mos.	Claim Frequency (9) 12 Mos.	Claim Frequency (10) 24 Mos.	(11) Pure Prem. Ratio (7)÷(8) CWPP	(12) Claim Freq. Ratio (9)÷(10) CWF
Bodily Injury											
2,488,797	2,582,573	22,557,576	40,835,555	35,676	60,704	9.06	15.82	1.43	2.35	.573	.609
Property Damage											
2,561,614	2,579,005	13,903,475	23,331,939	136,039	229,511	5.43	9.05	5.31	8.89	.600	.597

Credibility Table for State Earned Factor Calculations

No. of Claims	Volume Index	No. of Claims	Volume Index	No. of Claims	Volume Index
0 - 24	0	1,225 - 1,599	.35	4,900 - 5,624	.70
25 - 99	.05	1,600 - 2,024	.40	5,625 - 6,399	.75
100 - 224	.10	2,025 - 2,499	.45	6,400 - 7,224	.80
225 - 399	.15	2,500 - 3,024	.50	7,225 - 8,099	.85
400 - 624	.20	3,025 - 3,599	.55	8,100 - 9,024	.90
625 - 899	.25	3,600 - 4,224	.60	9,025 - 9,999	.95
900 - 1,224	.30	4,225 - 4,899	.65	10,000 & Over	1.00

Explanations of Symbols:

V = Volume Index, for table above, based upon 1951-53 number of claims as of 12 months.
SSP = Ratio of statewide pure premium as of 12 months to statewide pure premium as of 24 months.
SF = Ratio of statewide claim frequency as of 12 months to statewide claims frequency as of 24 months.
CWPP = Ratio of countrywide pure premium as of 12 months to countrywide pure premium as of 24 months.
CWF = Ratio of countrywide claim frequency as of 12 months to countrywide claim frequency as of 24 months.

MUTUAL INSURANCE
RATING BUREAU

AUTOMOBILE LIABILITY INSURANCE EXPERIENCE

POLICY YEARS 1950 - 1954

EXHIBIT C
Sheet 1

NEW YORK

MEMBERS AND SUBSCRIBERS
OF M.I.R.B. AND N.B.C.U.

PRIVATE PASSENGER CARS - ALL CLASSES COMBINED - BY STATISTICAL TERRITORY

BODILY INJURY

POLICY YEAR	EARNED NUMBER OF CARS	EARNED PREMIUM *	LIABILITY INCURRED LOSSES BASIC LIMITS	LIABILITY INCURRED LOSSES EXCESS	NUMBER OF CLAIMS	MEDICAL PAYMENTS INCURRED LOSSES	CLAIM FREQUENCY †	AVERAGE CLAIM COST ††	LOSS RATIO **	PURE PREMIUM ††	1) '54 WRIT. CARS 2) '54 WRIT. PREM.
3128	34 BINGHAMTON										
50	27754	933412	521995	72051	601	64659	2.2	869	.71	18.81	
1	28748	1101120	564979	124385	662	53807	2.3	853	.67	19.65	
2	28524	1258494	529109	118021	543	68014	1.9	974	.57	18.55	
53	30139	1546673	576823	96126	631	70007	2.1	914	.48	19.14	
54	16730	861820	340741	77676	380	44449	2.3	897	.54	20.37	1) 31,059
	131895	5701519	2533647	488259	2817	300936	2.1	899	.58	19.21	2) 1,598,924
3129	14 GLOVERSVILLE										
50	8216	436284	305686	29433	355	21789	4.3	861	.82	37.21	
1	8528	516858	324768	29082	369	29406	4.3	880	.74	38.08	
52	8234	583678	311142	52628	300	32980	3.6	1037	.68	37.79	
53	8150	700834	264391	33855	295	27191	3.6	896	.46	32.44	
4	4562	390905	173018	11067	170	17304	3.7	1018	.52	37.93	1) 8,464
	37690	2628559	1379005	156065	1489	128670	4.0	926	.63	36.59	2) 725,242
3135	7 AMSTERDAM										
50	8377	524772	328163	153735	359	30481	4.3	914	.98	39.17	
1	7804	557286	356682	40921	367	36577	4.7	972	.78	45.71	
52	7123	601256	262646	63086	251	25361	3.5	1046	.58	36.87	
53	6410	619993	213782	16350	225	24983	3.5	950	.41	33.35	
54	3326	322552	105459		109	9320	3.3	968	.36	31.71	1) 6,171
	33040	2625859	1266732	274092	1311	126722	4.0	966	.64	38.34	2) 598,427
3136	29 GLENS FALLS										
50	8940	468954	311978	52547	374	16222	4.2	834	.81	34.90	
51	9048	591796	349435	55849	325	26107	3.6	1075	.73	38.62	
52	8978	660043	386445	170960	322	30129	3.6	1200	.89	43.04	
53	9438	708050	284378	60281	322	26779	3.4	883	.52	30.13	
54	5381	403345	193763	23565	212	17021	3.9	914	.58	36.02	1) 9,982
	41785	2832168	1525999	363202	1555	116258	3.7	981	.71	36.52	2) 748,321
3137	12 OSWEGO										
50	7738	378928	260601	24823	328	22466	4.2	795	.81	33.68	
51	8077	432603	243396	49784	340	19017	4.2	716	.72	30.13	
2	7791	495851	227476	29316	306	26256	3.9	743	.57	29.20	
3	7925	660806	264385	21482	325	31738	4.1	813	.48	33.36	
54	4260	355932	142708	12488	167	9792	3.9	855	.46	33.50	1) 7,904
	35791	2324120	1138566	137893	1466	109269	4.1	777	.60	31.81	2) 660,357
3140	17 ROCHESTER										
50	82864	4001353	2059415	146107	2779	129454	3.4	741	.58	24.85	
51	87627	4711140	2235356	287030	2831	158319	3.2	790	.57	25.51	
52	90034	5408550	2446003	448999	2686	177540	3.0	911	.57	27.17	
53	91658	5964252	2659658	410379	2882	204321	3.1	923	.55	29.02	
54	50878	3343577	1527253	199185	1751	105264	3.4	872	.55	30.02	1) 94,394
	403061	23428872	10927685	1491700	12929	774898	3.2	845	.56	27.11	2) 6,203,297
3147	13 SYRACUSE										
50	49003	2419492	1449689	156809	2040	107012	4.2	711	.71	29.58	
51	51434	2812685	1742121	242849	2099	139528	4.1	830	.76	33.87	
52	50378	3206346	1486241	208200	1835	129796	3.6	810	.57	29.50	
53	54335	4017827	1657955	248620	2015	142795	3.7	823	.51	30.51	
54	30119	2230879	1012120	173905	1232	98792	4.1	822	.58	33.61	1) 55,879
	235269	14687229	7348126	1030383	9221	617923	3.9	797	.61	31.23	2) 4,138,922

* PREMIUMS INCLUDE CHARGES FOR EXCESS LIMITS (FOR BODILY INJURY THEY ALSO INCLUDE PREMIUMS FOR MEDICAL PAYMENTS COVERAGE.)
† CLAIM FREQUENCIES ARE PER 100 CARS.
** TOTAL LIMITS.
†† BASIC LIMITS.

NOTES.

1. THE 1954 POLICY YEAR EARNED NUMBER OF CARS AND EARNED PREMIUMS ARE CALCULATED BY APPLYING THE FOLLOWING FACTOR(S) TO THE WRITTEN NUMBER OF CARS AND WRITTEN PREMIUMS. .539
2. THE INCURRED LOSSES INCLUDE ALL[redacted] CLAIM ADJUSTMENT EXPENSES.
3. CLAIM FREQUENCIES, AVERAGE CLAIM COSTS AND PURE PREMIUMS ARE FOR LIABILITY COVERAGE ONLY. LOSS RATIOS ARE FOR LIABILITY AND MEDICAL PAYMENTS COVERAGE COMBINED.

MUTUAL INSURANCE
RATING BUREAU

POLICY YEARS 1950 - 1954

Sheet 2

N E W Y O R K

MEMBERS AND SUBSCRIBERS
OF M.I.R.B. AND N.B C.U.

PRIVATE PASSENGER CARS - ALL CLASSES COMBINED - BY STATISTICAL TERRITORY

PROPERTY DAMAGE

POLICY YEAR	EARNED NUMBER OF CARS	EARNED PREMIUM *	LIABILITY INCURRED LOSSES BASIC LIMITS	LIABILITY INCURRED LOSSES EXCESS	LIABILITY NUMBER OF CLAIMS	MEDICAL PAYMENTS INCURRED LOSSES	CLAIM FREQUENCY †	AVERAGE CLAIM COST ††	LOSS RATIO **	PURE PREMIUM ††	1) '54 WRIT. CARS 2) '54 WRIT. PREM.
3128 34 BINGHAMTON											
50	27381	371260	307582		3359		12.3	92	.83	11.23	
51	28610	394504	330610		3136		11.0	105	.84	11.56	
52	28483	451035	288929		2756		9.7	105	.64	10.14	
53	30313	606738	323845		2812		9.3	115	.53	10.68	
54	17620	359825	196805		1681		9.5	117	.55	11.17	1) 30,966
	132407	2183362	1447771		13744		10.4	105	.66	10.93	2) 632,382
3129 14 GLOVERSVILLE											
50	8200	145702	111474		1112		13.6	100	.77	13.59	
51	8522	158361	116787		1118		13.1	104	.74	13.70	
52	8206	171090	105179		878		10.7	120	.61	12.82	
53	8124	207365	102002		889		10.9	115	.49	12.56	
54	4812	122120	64011		496		10.3	129	.52	13.30	1) 8,457
	37864	804638	499453		4493		11.9	111	.62	13.19	2) 214,623
3135 7 AMSTERDAM											
50	8353	147797	110669		1046		12.5	106	.75	13.25	
51	7727	149368	115502		932		12.1	124	.77	14.95	
52	7155	154368	89746		717		10.0	125	.58	12.54	
53	6396	161648	83959		673		10.5	125	.52	13.13	
54	3507	88705	42947		359		10.2	120	.48	12.25	1) 6,162
	33138	701886	442823		3727		11.2	119	.63	13.36	2) 155,897
3136 29 GLENS FALLS											
50	8862	143527	104325		927		10.5	113	.73	11.77	
51	9034	161562	142777		1029		11.4	139	.88	15.80	
52	8960	171214	109182		835		9.3	131	.64	12.19	
53	9441	191207	120366		860		9.1	140	.63	12.75	
54	5680	115032	67790		460		8.1	147	.59	11.93	1) 9,985
	41977	782542	544440		4111		9.8	132	.70	12.97	2) 202,166
3137 12 OSWEGO											
50	7706	144504	100639		954		12.4	105	.70	13.06	
51	8060	155675	105726		953		11.8	111	.68	13.12	
52	7790	166559	96669		784		10.1	123	.58	12.41	
53	7905	203565	110698		798		10.1	139	.54	14.00	
54	4493	114918	67260		460		10.2	146	.59	14.97	1) 7,895
	35954	785221	480992		3949		11.0	122	.61	13.38	2) 201,964
3140 17 ROCHESTER											
50	82635	1505877	967691		11237		13.6	86	.64	11.71	
51	87423	1633919	1013773		10930		12.5	93	.62	11.60	
52	89884	1826347	981402		9605		10.7	102	.54	10.92	
53	91404	2132226	1070261		9829		10.8	109	.50	11.71	
54	53650	1255559	682710		5852		10.9	117	.54	12.73	1) 94,288
	404996	8353928	4715837		47453		11.7	99	.56	11.64	2) 2,208,606
3147 13 SYRACUSE											
50	49517	946446	668495		7185		14.5	93	.71	13.50	
51	51349	1032034	715024		6584		12.8	109	.69	13.92	
52	50396	1101664	659299		5547		11.0	119	.60	13.08	
53	54232	1331521	692216		5865		10.8	118	.52	12.76	
54	31689	779436	423490		3433		10.8	123	.54	13.36	1) 55,692
	237183	5191101	3158524		28614		12.1	110	.61	13.32	2) 1,369,835

* PREMIUMS INCLUDE CHARGES FOR EXCESS LIMITS (FOR BODILY INJURY THEY ALSO INCLUDE PREMIUMS FOR MEDICAL PAYMENTS COVERAGE.)
† CLAIM FREQUENCIES ARE PER 100 CARS.
** TOTAL LIMITS.
†† BASIC LIMITS.

NOTES:
1. THE 1954 POLICY YEAR EARNED NUMBER OF CARS AND EARNED PREMIUMS ARE CALCULATED BY APPLYING THE FOLLOWING FACTOR(S) TO THE WRITTEN NUMBER OF CARS AND WRITTEN PREMIUMS: .569
2. THE INCURRED LOSSES INCLUDE ALLOCATED CLAIM ADJUSTMENT EXPENSES.
3. CLAIM FREQUENCIES, AVERAGE CLAIM COSTS AND PURE PREMIUMS ARE FOR LIABILITY COVERAGE ONLY. LOSS RATIOS ARE FOR LIABILITY AND MEDICAL PAYMENTS COVERAGE COMBINED.

Exhibit D

NEW YORK - AUTOMOBILE LIABILITY INSURANCE
1956 PRIVATE PASSENGER RATE REVISION

Calculation of Bodily Injury Loss Development
Factor to Apply to Policy Year 1953

Members & Subscribers of N.B.C.U. & M.I.R.B.

Policy Year	Incurred Losses Basic Limits at 24 Mos.	Incurred Losses Basic Limits at 36 Mos.	Loss Devel't Factor Basic Limits	Incurred Losses for Increment between 5/10 and 10/20 Limits at 24 Mos.	Incurred Losses for Increment between 5/10 and 10/20 Limits at 36 Mos.	Loss Development Factor for Increment Between 5/10 and 10/20 Limits
1950	57,876,322	57,976,909	1.002	4,616,061	5,295,567	1.147
1951	67,961,788	67,798,198	.998	8,131,413	8,633,703	1.062
1952	66,584,059	65,568,694	.985	8,790,749	10,062,257	1.145
Selected Factor (3yr. mean)			.995			1.118

Calculation of Bodily Injury Earned Factor to Apply to
10/20 Limits Experience for Policy Year 1954

A. Earned Factor For Increment

(1) Policy Year	Number of Written Cars (2) 12 Months	Number of Written Cars (3) Final	Incurred Losses-Increment Between 5/10 and 10/20 Limits (4) 12 Months	Incurred Losses-Increment Between 5/10 and 10/20 Limits (5) Final
1952	2,079,685	2,085,145	4,175,587	10,062,257
1953	2,177,435	2,166,448	4,681,868	11,630,506(a)
1954	2,201,853		5,401,442	

(6) Policy Year	Pure Premium for Increment (7) 12 Months (4)÷(2)	Pure Premium for Increment (8) Final (5)÷(3)	Ratio of Pure Premiums for Increment (7)÷(8)
1952	2.01	4.83	.416
1953	2.15	5.36	.401
1954	2.45		
Two Year Mean			.409

(a) The incurred Losses as of 24 months of $10,402,957 were developed to 36 months by applying the Loss Development Factor of 1.118.

B. Earned Factor for 10/20 Limits

(1) Policy Year	Ratios of Pure Premium (2) Basic Limits	Ratios of Pure Premium (3) Increment	Ratios of Pure Premium (4) Average .862x(2)+.138x(3)*
1952	.541	.416	.524
1953	.537	.401	.518
Mean	.539	.409	.521

* Weights based on Policy Year 1953 pure premium for basic limits ($33.49) and increment ($5.36):

33.49÷(33.49+5.36) = .862
5.36÷(33.49+5.36) = .138

NEW YORK

Exhibit I

AUTOMOBILE LIABILITY INSURANCE - 1956 PRIVATE PASSENGER RATE REVISION
Development of Proposed Rate Level Changes

Policy Years 1953 and 1954 as of December 31, 1954

(1) Coverage	(2) Pol. Year	10/20/5 Limits Premium at Present Rates (3) Written	(4) Earned(a)	(5) 10/20/5 Limits Losses Incurred Including Allocated Loss Adjustment Expenses	(6) Loss Ratio at Present Rates (5)÷(4)	(7) Pol. Yr. 1953-54 Mean L.R. Derived from Col. (6)	(8) Expected Loss and Allocated Loss Adj. Ratio	(9) Indicated and Proposed Percent Change [(7)÷(8)]-1.0(b)
New York City								
B.I.	1953	$42,174,557	$42,174,557	$23,547,860(c)	.5583			
	1954	42,402,790	22,091,854	13,108,242	.5934	.5759	.5451	+5.7%
P.D.	1953	10,386,786	10,386,786	5,495,378	.5291			
	1954	10,456,522	5,949,761	3,121,551	.5247	.5269	.5226	+0.8
B.I. & P.D.								+4.7
Balance of State								
B.I.	1953	107,930,642	107,930,642	60,714,797(c)	.5625			
	1954	110,170,136	57,398,641	34,753,806	.6055	.5840	.5451	+7.1%
P.D.	1953	37,150,533	37,150,533	19,958,132	.5372			
	1954	38,051,888	21,651,524	11,630,633	.5372	.5372	.5226	+2.8
B.I. & P.D.								+6.0

Experience of Members and Subscribers of the National Bureau of Casualty Underwriters and the Mutual Insurance Rating Bureau.

(a) Policy Year 1954 calculated on an earned basis by the application of the following factors to written premium: B.I., .521; P.D., .569.

(b) The indicated percent change for New York State Entire is B.I. +6.7%, P.D. +2.4%, B.I. & P.D. Combined +5.7%.

(c) Loss Development Factors applied to Policy Year 1953 B.I. losses were: .995 for $5,000/10,000 limits; 1.118 for increment to $10,000/20,000 limits.

Exhibit 2
Sheet 1

NEW YORK
AUTOMOBILE LIABILITY - 1956 PRIVATE PASSENGER RATE REVISION
Development of Proposed Rate Level Changes by Territories
for New York State Excluding New York City

Members and Subscribers of N.B.C.U. and M.I.R.B. — Bodily Injury

(1) Territory	(2) No. Cars Written (Policy Year 1954)	(3) Pres. Avg. Rate	Pure Premiums Including Allocated Loss Adjustment (5/10 Limits) (4) Pol. Yrs. 1952-54	(5) Underly.	Pure Prems. Adjusted to Proposed Rate Level on 1954 Distribution (6) Pol. Yrs. 1952-54	(7) Underly.	(8) Credibility	(9) Formula Pure Prem.	(10) Proposed Rate Level Change	(11) Percent Change Applied to Class 3 Rates
63 - Monticello (25)	5,499	76.79	47.88	41.86	48.58	44.83	.80	47.83	+14.3	+11.6
61 - Queens (2)	21,993	75.16	43.17	40.97	43.80	43.88	1.00	43.80	+ 6.9	+ 0.8
23 - Saratoga Springs (4)	7,614	64.36	40.27	35.08	40.86	37.57	.80	40.20	+14.6	+11.8
55 - Queens Sub. (3)	218,943	64.09	38.63	34.94	39.20	37.42	1.00	39.20	+12.2	+ 5.8
01 - Albany (8)	42,061	65.40	36.67	35.65			1.00			
89 - Troy (42)	17,358	64.81	35.77	35.33			1.00			
Sub-total	59,419	65.23	36.41	35.56	36.95	38.08	1.00	36.95	+ 3.9	- 2.0
36 - Glens Falls (29)	9,982	59.69	32.79	32.54	33.27	34.85	.80	33.59	+ 3.2	+ 0.7
88 - Schenectady (6)	36,344	55.92	32.64	30.48	33.12	32.64	1.00	33.12	+ 8.7	+ 2.5
29 - Gloversville (14)	8,464	62.20	32.48	33.91	32.96	36.32	.80	33.63	- 0.8	- 3.2
83 - Nassau County (20)	233,531	54.97	31.74	29.96	32.21	32.09	1.00	32.21	+ 7.5	+ 4.9
86 - Utica (18)	21,649	56.58	31.92	30.84			1.00			
24 - Rome (19)	7,307	56.55	28.90	30.83			.70			
Sub-total	28,956	56.57	31.16	30.84	31.62	33.03	1.00	31.62	+ 2.5	- 3.3
99 - Suffolk County (32)	90,360	51.50	31.05	28.07	31.51	30.06	1.00	31.51	+12.3	+ 9.6
08 - Buffalo (9)	137,177	54.65	30.62	29.79	31.07	31.91	1.00	31.07	+ 4.3	- 1.6
35 - Amsterdam (7)	6,171	70.59	30.61	38.48	31.06	41.21	.70	34.11	-11.4	-13.5
98 - Rensselaer County (38)	7,612	53.39	29.95	29.10	30.39	31.17	.70	30.62	+ 5.2	+ 2.7
87 - Putnam County (40)	6,839	56.52	29.05	30.81	29.48	33.00	.70	30.54	- 0.9	- 3.3
37 - Oswego (12)	7,904	53.74	28.85	29.29	29.27	31.37	.80	29.69	+ 1.4	- 1.0
47 - Syracuse (13)	55,879	50.68	28.11	27.63	28.52	29.59	1.00	28.52	+ 3.2	- 2.7
52 - Ft.Plain & Herkimer (43)	12,551	52.51	27.80	28.62	28.21	30.65	.90	28.45	- 0.6	- 3.0
56 - New York City Sub. (5)	132,439	44.86	26.91	24.45	27.31	26.19	1.00	27.31	+11.7	+ 9.0
40 - Rochester (17)	94,394	43.43	25.89	23.67	26.27	25.35	1.00	26.27	+11.0	+ 4.7
65 - Ossining (24)	26,738	41.77	25.59	22.77	25.97	24.39	1.00	25.97	+14.1	+11.4
81 - Buff. Sub. & N.F.Sub.(30)	28,912	41.38	25.82	22.56			1.00			
76 - Niagara Falls (15)	30,810	45.21	23.13	24.64			1.00			
Sub-total	59,722	43.36	24.43	23.64	24.79	25.32	1.00	24.79	+ 4.9	- 3.7

See Sheet 5 for notes.

NEW YORK
AUTOMOBILE LIABILITY - 1956 PRIVATE PASSENGER RATE REVISION

Exhibit 2
Sheet 2

Development of Proposed Rate Level Changes by Territories
for New York State Excluding New York City

Members and Subscribers of N.B.C.U. and M.I.R.B.

Bodily Injury

(1) Territory	(2) No. Cars Written (Policy Year 1954)	(3) Pres. Avg. Rate	Pure Premiums Including Allocated Loss Adjustment (5/10 Limits) (4) Pol. Yrs. 1952-54	(5) Underly.	Pure Prems. Adjusted to Proposed Rate Level on 1954 Distribution (6) Pol. Yrs. 1952-54	(7) Underly.	(8) Credibility	(9) Formula Pure Prem.	(10) Proposed Rate Level Change	(11) Percent Change Applied to Class 3 Rates
62 - Kingston (27)	17,848	47.91	25.52	26.12			1.00			
20 - Newburgh (27)	12,672	48.95	22.88	26.68			.90			
Sub-total	30,520	48.34	24.42	26.35	24.78	28.22	1.00	24.78	- 6.0	- 8.3
92 - Staten Island (10)	25,467	47.68	24.15	25.99	24.51	27.84	1.00	24.51	- 5.7	- 8.0
27 - Elmira (11)	13,052	51.59	24.11	28.12	24.46	30.12	.80	25.59	- 9.0	-14.2
79 - Syracuse Suburban (22)	13,949	37.59	24.00	20.48	24.35	21.93	.90	24.11	+17.7	+14.9
67 - Northern Counties (46)	89,054	43.28	23.53	23.59	23.88	25.26	1.00	23.88	+ 1.2	- 1.2
59 - Catskill & Columbia Co.(33)	17,964	41.62	23.03	22.69	23.37	24.30	.90	23.46	+ 3.4	+ 0.9
58 - Dutchess Co. Rem. (23)	15,127	39.51	25.09	21.54			.90			
21 - Poughkeepsie (44)	16,686	41.48	21.09	22.61			.90			
Sub-total	31,813	40.54	22.99	22.10	23.33	23.67	1.00	23.33	+ 5.6	+ 6.4
68 - Rockland County (28)	20,065	35.66	22.90	19.44	23.24	20.82	1.00	23.24	+19.5	+16.6
Territory 54 (36)	29,061	40.69	22.35	22.18			1.00			
60 - Genesee County (31)	9,081	40.51	21.89	22.08			.70			
80 - Rochester Suburban(35)	4,581	40.01	20.93	21.81			.40			
Sub-total	42,723	40.58	22.10	22.12	22.42	23.69	1.00	22.42	+ 1.4	- 1.0
64 - Middletown (26)	20,565	36.96	21.71	20.15	22.03	21.58	1.00	22.03	+ 9.3	+ 6.7
69 - Central Counties (45)	91,255	34.42	21.48	18.76			1.00			
Territory 57 (41)	36,474	35.20	21.24	19.19			1.00			
25 - Auburn (21)	8,462	34.96	20.09	19.06			.70			
53 - Cortland-Ithaca (16)	13,614	38.79	19.67	21.14			.80			
28 - Binghamton (34)	31,039	36.50	17.44	19.90			1.00			
Sub-total	180,844	35.29	20.54	19.24	20.84	20.61	1.00	20.84	+ 8.3	+ 6.8
22 - Watertown (37)	8,614	40.43	19.80	22.04	20.09	23.60	.70	21.14	- 4.1	- 6.4
66 - Western Counties (47)	74,582	33.50	19.30	18.26			1.00			
26 - Jamestown (39)	12,821	35.01	17.92	19.08			.70			
Sub-total	87,403	33.72	19.10	18.38	19.38	19.68	1.00	19.38	+ 5.4	+ 2.3
Grand Total	1,850,564	49.61		27.04	28.96	28.96		29.00		

See Sheet 5 for notes.

Exhibit 2
Sheet 3

NEW YORK

AUTOMOBILE LIABILITY - 1956 PRIVATE PASSENGER RATE REVISION

Development of Proposed Rate Level Changes by Territories
for New York State Excluding New York City

Members and Subscribers of N.B.C.U. and M.I.R.B.

Property Damage

(1) Territory	(2) No. Cars Written (Policy Year 1954)	(3) Pres. Avg. Rate	Pure Premiums Including Allocated Loss Adjustment (4) Pol. Yrs. 1952-54	Pure Premiums Including Allocated Loss Adjustment (5) Underly.	Pure Prems. Adjusted to Proposed Rate Level on 1954 Distribution (6) Pol. Yrs. 1952-54	Pure Prems. Adjusted to Proposed Rate Level on 1954 Distribution (7) Underly.	(8) Credibility	(9) Formula Pure Prem.	(10) Proposed Rate Level Change	(11) Percent Change Applied to Class 3 Rates
63 - Monticello (25)	5,488	27.08	13.87	14.15	14.04	14.55	1.00	14.04	- 0.8	- 3.2
61 - Queens (2)	21,911	25.75	13.65	13.46	13.82	13.84	1.00	13.82	+ 2.7	- 3.2
55 - Queens Suburban (3)	220,057	24.34	13.03	12.72	13.19	13.08	1.00	13.19	+ 3.7	- 2.2
01 - Albany (8)	41,976	24.48	12.87	12.79			1.00			
89 - Troy (42)	17,328	24.26	12.38	12.68			1.00			
Sub-total	59,304	24.42	12.73	12.76	12.88	13.12	1.00	12.88	+ 0.9	- 4.9
08 - Buffalo (9)	136,469	22.49	12.56	11.75	12.71	12.08	1.00	12.71	+ 8.2	+ 2.0
83 - Nassau County (20)	233,773	23.82	12.52	12.45	12.67	12.80	1.00	12.67	+ 1.8	- 0.6
37 - Oswego (12)	7,895	22.81	11.79	11.92	11.93	12.25	1.00	11.93	+ 0.1	- 2.3
24 - Rome (19)	7,300	21.03	11.68	10.99			1.00			
86 - Utica (18)	21,636	21.03	11.48	10.99			1.00			
Sub-total	28,936	21.03	11.53	10.99	11.67	11.30	1.00	11.67	+ 6.2	+ 0.1
47 - Syracuse (13)	55,692	21.43	11.17	11.20	11.31	11.51	1.00	11.31	+ 1.0	- 4.8
29 - Gloversville (14)	8,457	20.10	11.02	10.50	11.15	10.79	1.00	11.15	+ 6.2	+ 3.7
56 - New York City Sub. (5)	132,246	20.49	11.00	10.71	11.13	11.01	1.00	11.13	+ 3.9	+ 1.4
88 - Schenectady (6)	36,320	21.23	10.92	11.09	11.05	11.40	1.00	11.05	- 0.4	- 6.1
87 - Putnam County (40)	6,833	20.24	10.88	10.58	11.01	10.88	1.00	11.01	+ 4.1	+ 1.6
35 - Amsterdam (7)	6,162	21.99	10.80	11.49	10.93	11.81	1.00	10.93	- 4.9	- 7.2
81 - Buff.Sub. & N.F.Sub.(30)	28,877	19.10	10.70	9.98			1.00			
76 - Niagara Falls (15)	30,798	21.51	10.55	11.24			1.00			
Sub-total	59,675	20.34	10.62	10.63	10.75	10.93	1.00	10.75	+ 1.1	- 7.2
36 - Glens Falls (29)	9,983	21.52	10.50	11.25	10.63	11.57	1.00	10.63	- 5.5	- 7.8
52 - Ft.Plain & Herkimer (43)	12,544	19.36	10.33	10.12	10.45	10.40	1.00	10.45	+ 3.3	+ 0.8
25 - Saratoga Springs (4)	7,604	21.73	10.32	11.36	10.44	11.68	1.00	10.44	- 8.1	-10.3
92 - Staten Island (10)	25,418	18.74	10.19	9.79	10.31	10.06	1.00	10.31	+ 5.3	+ 2.8

See Sheet 5 for notes.

AUTOMOBILE LIABILITY - 1956 PRIVATE PASSENGER RATE REVISION

Development of Proposed Rate Level Changes by Territories for New York State Excluding New York City

Members and Subscribers of N.B.C.U. and M.I.R.B. — Property Damage

(1) Territory	(2) No. Cars Written (Policy Year 1954)	(3) Pres. Avg. Rate	Pure Premiums Including Allocated Loss Adjustment (4) Pol. Yrs. 1952-54	(5) Underly.	Pure Prems. Adjusted to Proposed Rate Level on 1954 Distribution (6) Pol. Yrs. 1952-54	(7) Underly.	(8) Credi-bility	(9) Formula Pure Prem.	(10) Proposed Rate Level Change	(11) Percent Change Applied to Class 3 Rates
20 - Newburgh (27)	12,615	20.28	10.94	10.60			1.00			
62 - Kingston (27)	17,840	19.85	9.51	10.37			1.00			
Sub-total	30,455	20.03	10.10	10.47	10.22	10.76	1.00	10.22	- 2.4	- 4.7
40 - Rochester (17)	94,288	17.73	10.07	9.27	10.19	9.53	1.00	10.19	+ 9.9	+ 3.6
98 - Rensselaer County (38)	7,611	20.85	9.98	10.90	10.10	11.21	1.00	10.10	- 7.3	- 9.5
22 - Watertown (37)	8,614	17.57	9.87	9.18	9.99	9.44	1.00	9.99	+ 8.8	+ 6.2
99 - Suffolk County (32)	90,187	18.62	9.70	9.73	9.82	10.00	1.00	9.82	+ 0.9	- 1.5
79 - Syracuse Sub. (22)	13,928	17.58	9.42	9.19	9.53	9.45	1.00	9.53	+ 3.7	+ 1.2
68 - Rockland County (28)	20,209	16.71	9.41	8.73	9.52	8.97	1.00	9.52	+ 9.0	+ 6.4
64 - Middletown (26)	20,549	17.38	9.26	9.08	9.37	9.33	1.00	9.37	+ 3.2	+ 0.7
65 - Ossining (24)	26,707	16.75	9.21	8.75	9.32	9.00	1.00	9.32	+ 6.5	+ 3.9
Territory 54 (36)	29,031	18.51	9.39	9.67			1.00			
80 - Rochester Sub. (35)	4,581	16.12	8.80	8.42			.80			
60 - Genesee County (31)	9,076	18.44	8.68	9.64			1.00			
Sub-total	42,688	18.24	9.18	9.53	9.29	9.80	1.00	9.29	- 2.5	- 4.8
25 - Auburn (21)	8,450	16.39	9.71	8.57			1.00			
53 - Cortland-Ithaca (16)	13,611	18.14	9.62	9.48			1.00			
69 - Central Counties (45)	91,231	16.12	9.31	8.42			1.00			
28 - Binghamton (34)	30,966	17.83	9.11	9.32			1.00			
Territory 57 (41)	36,442	16.51	8.60	8.63			1.00			
Sub-total	180,700	16.66	9.17	8.71	9.28	8.95	1.00	9.28	+ 6.5	+ 5.0
27 - Elmira (11)	13,025	18.61	9.06	9.73	9.17	10.00	1.00	9.17	- 5.8	-11.2
58 - Dutchess County (23)	15,122	17.52	9.03	9.16			1.00			
21 - Poughkeepsie (44)	16,650	18.65	8.86	9.75			1.00			
Sub-total	31,772	18.11	8.94	9.46	9.05	9.72	1.00	9.05	- 4.3	- 3.5
67 - Northern Counties (46)	89,022	18.17	8.93	9.50	9.04	9.77	1.00	9.04	- 4.8	- 7.1
26 - Jamestown (39)	12,817	23.35	10.78	12.20			1.00			
66 - Western Counties (47)	74,579	16.13	8.27	8.43			1.00			
Sub-total	87,396	17.19	8.64	8.98	8.74	9.23	1.00	8.74	- 2.7	- 5.5
59 - Catskill & Columbia Co. (33)	17,953	16.26	8.28	8.50	8.38	8.74	1.00	8.38	- 1.4	- 3.8
Grand Total	1,849,871	20.57		10.74	11.04	11.04		11.04		

See Sheet 5 for notes.

AUTOMOBILE LIABILITY INSURANCE-1956 PRIVATE PASSENGER RATE REVISION

Exhibit 3

Classification Experience Under the Seven Class Plan

Policy Year 1954 as of December 31, 1954
Bodily Injury and Property Damage Combined

Members & Subscribers of N.B.C.U.
All Companies Reporting to M.I.R.B.

22 States for M.I.R.B. and 26 States for N.B.C.U.(a)

Territory	Classification	Basic Limits Earned Premium at Present N.B.C.U. Class 3 Rates	Basic Limits Incurred Losses(b)	Number of Claims	Loss & Loss Adjustment Ratio at Present N.B.C.U. Class 3 Rates	Differentials to Class 3		
						Present	Indicated	Proposed (e)
Rural and Small Cities	1A	$20,092,104	$7,704,704	31,458	.383	.60	.62	.60
	1B	18,780,329	7,416,548	29,842	.395	.60	.64	.60
	1C	2,275,955	1,223,492	4,094	.538	.85	.87	.85
	2A-2B(c)	5,153,641	3,618,489	12,786	.702	1.10	1.13(d)	1.15
	2C	2,043,862	2,572,411	7,287	1.259	1.50	2.03(d)	2.00
	3	3,554,707	2,205,478	8,006	.620	1.00	1.00	1.00
Large Cities	1A	25,507,347	9,989,435	40,626	.392	.60	.68	.65
	1B	32,632,430	13,661,655	53,176	.419	.70	.72	.70
	1C	2,245,340	1,343,395	4,303	.598	.85	1.03	.95
	2A-2B(c)	5,889,365	4,398,814	15,458	.747	1.10	1.29(d)	1.25
	2C	2,570,460	2,552,455	8,426	.993	1.50	1.72(d)	2.00
	3	6,907,379	4,000,047	15,736	.579	1.00	1.00	1.00

(a) The experience available under the 7 Class Plan in all states where the plan was effective during all of 1954 for the National Bureau and the Mutual Bureau and where either or both bureaus are licensed as a rating organization for automobile liability insurance.

(b) Including all loss adjustment; factors of 1.11 for bodily injury and 1.17 for property damage were applied to the losses and allocated loss adjustment expenses to include unallocated loss adjustment expenses.

(c) Class 2B was discontinued in February 1955 and risks in this class were transferred to Class 2A or Class 2D. Class 2D was subsequently eliminated in February 1956.

(d) The experience coded under Class 2 includes the experience developed for female operators under the age of 25. The age of female operators as a rating criterion was discontinued earlier this year with such insureds being classified under Class 1 or 3, whichever is applicable. The indicated differentials for Classes 2A and 2C for male operators only are shown below on the assumption that the indicated differentials for the female operators are equal to the weighted average of the indicated differentials shown above for Classes 1A, 1B and 1C:

Indicated Differentials for Classes 2A and 2C-Male Operators

Class	Rural and Small Cities	Large Cities
2A	1.33	1.53
2C	2.38	1.97

Exhibit 3a

AUTOMOBILE LIABILITY INSURANCE - 1956 PRIVATE PASSENGER RATE REVISION
DEVELOPMENT OF THE PERCENT CHANGE DUE TO THE INTRODUCTION OF THE REVISED CLASSIFICATION DIFFERENTIALS

(1) Present Rate Classification	First Quarter Policy Year 1955 Bodily Injury Exposure Distribution(a)			Differentials to Rate Class 3					
		New York Excluding New York City		New York City		New York Excluding New York City			
						Rural, Small Cities		Large Cities	
	(2) New York City	(3) Rural & Small Cities	(4) Large Cities	(5) Present	(6) Proposed	(7) Present	(8) Proposed	(9) Present	(10) Proposed
1A	65.4%	40.7%	39.3%	.68	.75	.60	.60	.60	.65
1B	15.1	31.0	40.9	.73	.80	.60	.60	.70	.70
1C	3.7	6.5	3.5	.77	.85	.85	.85	.85	.95
1AF	- (b)	6.5	0.6	.54	.60	.48	.48	.48	.52
2A	3.3	5.5	5.0	1.10	1.25	1.10	1.15	1.10	1.25
2C	1.3	2.5	2.6	1.50	2.00	1.50	2.00	1.50	2.00
2AF	- (b)	0.7	0.1	.88	1.00	.88	.92	.88	1.00
2CF	- (b)	0.2	- (b)	1.20	1.60	1.20	1.60	1.20	1.60
3	11.2	6.4	8.0	1.00	1.00	1.00	1.00	1.00	1.00
Total	100.0	100.0	100.0	.751	.822	.687	.704	.730	.774

<u>Percent Change Due to Introduction of Revised Classification Differentials</u>

New York City = .822 ÷ .751 = 1.095 or +9.5%
Rural and Small Cities = .704 ÷ .687 = 1.025 or +2.5%
Large Cities = .774 ÷ .730 = 1.060 or +6.0%

(a) This exposure distribution is based on the combined experience of National Bureau and Mutual Bureau Member and Subscriber companies for the first quarter of 1955. The reported exposures have been adjusted to reflect the recent transfer of young female operators from Class 2 to Class 1 or Class 3.
(b) The number of cars in this class is negligible.

<u>Note</u>: Large city differentials were applied in Queens, Queens Sub., Schenectady, Albany, Buffalo, Elmira, Syracuse, Niagara Falls, Rochester, Utica, Rome, Buffalo Sub., Niagara Falls Sub., Jamestown and Troy; the rural-small city differentials were applied to all other territories except New York City.

Where a rural or a small city territory was combined with a large city territory for rate making purposes, a weighted average of the above two percentages was used.

Exhibit, 4

NEW YORK

AUTOMOBILE LIABILITY INSURANCE - 1956 PRIVATE PASSENGER RATE REVISION

Proposed Rates

Type and Class	Terr. 5 N.Y.C. Sub. B.I.	Terr. 5 N.Y.C. Sub. P.D.	Terr. 6 Schenectady B.I.	Terr. 6 Schenectady P.D.	Terr. 7 Amsterdam B.I.	Terr. 7 Amsterdam P.D.	Terr. 8 Albany B.I.	Terr. 8 Albany P.D.
Private Pass.								
Class 1A	$41.	$17.	$51.	$18.	$53.	$18.	$56.	$20.
Class 1B	41.	17.	55.	19.	53.	18.	60.	22.
Class 1C	58.	24.	74.	26.	75.	26.	82.	29.
Class 2A	78.	32.	98.	34.	101.	35.	108.	39.
Class 2C	136.	56.	156.	54.	176.	60.	172.	62.
Class 3	68.	28.	78.	27.	88.	30.	86.	31.
Farmers								
Ind. Owners†								
Class 1AF	33.	14.	41.	14.	42.	14.	45.	16.
Class 2AF	62.	26.	78.	27.	81.	28.	86.	31.
Class 2CF	109.	45.	125.	43.	141.	48.	138.	50.
Funeral Car	75.	28.	86.	27.	97.	30.	95.	31.
School Buses:								
Priv. Pass......	68.	28.	78.	27.	88.	30.	86.	31.
Comm. or Bus:								
0-30 Pass......	61.	25.	70.	24.	79.	27.	77.	28.
31-60 Pass......	75.	31.	86.	30.	97.	33.	95.	34.
Over 60 Pass....	88.	36.	101.	35.	114.	39.	112.	40.

† Including family co-partnerships or corporations, the members of which reside on a farm and are not engaged in any occupation other than farming.

Mutual Insurance
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AUTOMOBILE LIABILITY - 1956 COMMERCIAL CAR RATE REVISION
COMMERCIAL CAR EXPERIENCE BY RATE CLASS

Exhibit 5
Sheet 1

All Companies Reporting
to N.B.C.U. and M.I.R.B.

Major Cities ∮

Policy Years 1950-53

(1) Rate Class	(2) Policy Year 1950-53 Basic Limits Earned Premium at Present Class 5CA Rates	(3) Policy Year 1950-53 Basic Limits Incurred Losses (Including all loss adjustment)	Policy Year Loss and Loss Adjustment Ratios at Class 5CA Rates (4) 1950	(5) 1951	(6) 1952	(7) 1953	(8) 1950-53	(9) 1952-53 Mean	Differentials * to Rate Class 5CA Indicated by (10) 1950-53	(11) 1952-53 Mean
			Bodily Injury							
3CA	$ 1,342,115	$ 1,317,681	.988	.851	1.116	.905	.982	1.011	1.55	1.64
CB	232,416	334,406	.806	1.639	2.107	.783	1.439	1.445	2.27	2.35
4CA	7,757,846	6,116,140	.657	.884	.861	.685	.788	.773	1.24	1.26
CB	659,819	780,449	1.110	1.581	.896	2.023	1.183	1.460	1.87	2.37
5CA	16,151,117	10,221,981	.578	.680	.661	.569	.633	.615	1.00	1.00
CB	922,491	730,878	.873	.640	.885	.591	.792	.738	1.25	1.20
			Property Damage							
3CA	1,387,576	1,360,205	.970	1.016	.983	.829	.980	.908	1.67	1.60
CB	220,915	287,265	1.118	1.267	1.664	.736	1.300	1.200	2.22	2.12
4CA	8,251,500	6,171,192	.679	.813	.772	.694	.748	.733	1.28	1.30
CB	778,801	832,408	1.078	1.267	.899	1.159	1.069	1.029	1.82	1.82
5CA	16,364,627	9,594,390	.562	.616	.599	.533	.586	.566	1.00	1.00
CB	797,467	739,149	.816	.990	.935	1.368	.927	1.152	1.58	2.04

∮ Those Cities with a population of 500,000 or more, excluding New York City and those territories in which the country-wide Commercial Automobile Business and Use Classification Rule was not in effect.

* The indicated differentials have been obtained by dividing the appropriate loss and loss adjustment ratio for each class by the corresponding ratio for class 5CA.

Mutual Insurance
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Exhibit 5
Sheet 2

AUTOMOBILE LIABILITY - 1956 COMMERCIAL CAR RATE REVISION

COMMERCIAL CAR EXPERIENCE BY RATE CLASS

All Companies Reporting to N.B.C.U. and M.I.R.B. Countrywide∮ Policy Years 1950-1953

(1) Rate Class	(2) Policy Year 1950-53 Basic Limits Earned Premium at Present Class 5CA Rates	(3) Policy Year 1950-53 Basic Limits Incurred Losses (Including all Loss Adjustment)	Policy Year Loss and Loss Adjustment Ratios at Class 5CA Rates (4) 1950	(5) 1951	(6) 1952	(7) 1953	(8) 1950-53	(9) 1952-53 Mean	Differentials* to Rate Class 5CA Indicated by (10) 1950-53	(11) 1952-53 Mean
			Bodily Injury							
3CA	$ 5,082,360	$ 6,466,296	1.114	1.336	1.330	1.437	1.272	1.384	2.10	2.30
CB	1,065,954	2,185,879	1.925	2.016	2.094	2.552	2.051	2.373	3.38	3.95
4CA	29,291,613	23,988,372	.764	.810	.868	.884	.819	.876	1.35	1.46
CB	3,179,906	4,088,440	1.123	1.388	1.245	1.777	1.286	1.511	2.12	2.51
5CA	75,839,395	45,972,914	.572	.638	.613	.588	.606	.601	1.00	1.00
CB	4,801,606	5,112,049	1.060	1.121	.999	1.186	1.065	1.093	1.76	1.82
			Property Damage							
3CA	5,563,450	5,932,835	.964	1.102	1.158	.999	1.066	1.079	1.92	1.93
CB	1,054,351	1,561,068	1.365	1.471	1.557	1.712	1.481	1.635	2.66	2.92
4CA	31,821,628	24,919,811	.717	.826	.806	.786	.783	.796	1.41	1.42
CB	3,597,759	4,080,098	1.009	1.223	1.119	1.345	1.134	1.232	2.04	2.20
5CA	77,074,135	42,890,572	.519	.584	.539	.549	.556	.559	1.00	1.00
CB	4,386,816	4,370,790	.904	1.028	1.030	1.168	.996	1.099	1.79	1.97

∮ Excluding cities with a population of 500,000 or more and Massachusetts and other states in which the countrywide Commercial Automobile Business and Use Classifications Rule was not in effect.

* The indicated differentials have been obtained by dividing the appropriate loss and loss adjustment ratio for each class by the corresponding ratio for Class 5CA.

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Mutual Insurance
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Exhibit 5
Sheet 3

COUNTRYWIDE∅
AUTOMOBILE LIABILITY - 1956 COMMERCIAL CAR RATE REVISION

Present and Proposed Differentials to Rate Class 5CA

(1)	Average Differentials to Class 5CA										(12)
Type and Class	Present		Indicated by *				Middle of Present, 4 Year and 2 Year Indicated Differentials		Halfway between Present and Middle		Proposed B.I. & P.D. Differentials to Class 5CA+
			Policy Yrs. 1950-53		Policy Yrs. 1952-53 Mean						
	(2) B.I.	(3) P.D.	(4) B.I.	(5) P.D.	(6) B.I.	(7) P.D.	(8) B.I.	(9) P.D.	(10) B.I.	(11) P.D.	
Major Cities											
3CA	1.93	1.94	1.55	1.67	1.64	1.60	1.64	1.67	1.79	1.81	1.80
3CB	3.64	4.15	2.27	2.22	2.35	2.12	2.35	2.22	3.00	3.19	3.10
4CA	1.18	1.18	1.25	1.28	1.26	1.30	1.25	1.28	1.22	1.23	1.25
4CB	2.44	2.70	1.87	1.82	2.37	1.82	2.37	1.82	2.41	2.26	2.35
5CA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5CB	2.01	2.30	1.25	1.58	1.20	2.03	1.25	2.03	1.63	2.17	1.90
Balance of Country											
3CA	1.82	1.92	2.10	1.91	2.30	[illegible]	2.10	1.92	1.96	1.92	1.95
3CB	3.54	4.13	3.38	2.66	3.95	2.92	3.54	2.92	3.54	3.53	3.55
4CA	1.18	1.18	1.35	1.41	1.46	1.42	1.35	1.41	1.27	1.30	1.30
4CB	2.32	2.70	2.12	2.04	2.52	2.20	2.32	2.20	2.32	2.45	2.40
5CA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5CB	1.99	2.25	1.76	1.79	1.82	1.96	1.82	1.96	1.96	2.11	2.00

Note: It is proposed to maintain the same rate relationships for Rate Classes 7 and 8 initially adopted in most jurisdictions in 1955 since no experience for these rate classes is yet available. The relationships for these classes are as follows:

Class	Relationship	Proposed Differentials to Class 5CA: Major Cities	Proposed Differentials to Class 5CA: Bal. of Country
7CA	Class 4 plus 15%	1.45	1.50
7CB	Class 4 plus 15%	2.70	2.75
8CA	Class 5 less 15%	.85	.85
8CB	Class 5 less 15%	1.60	1.70

∅ Excluding New York City and Massachusetts and other states in which the countrywide Commercial Automobile Business and Use Classification Rule was not in effect.
* From Columns 10 and 11 of Exhibit 3, sheets 1 and 2.
\+ Mean of B.I. & P.D. Differentials in columns 10 and 11, rounded to nearest .05.

Appendix

Trend Data Supplementing Policy Year Experience for Automobile Liability Insurance

Policy year experience is supplemented by calendar year trend data which are used to measure the change in the loss level between the period of the latest available policy year experience and the time this experience is used for rate making. Calendar year data are suitable for this purpose because they can be compiled for more recent periods than policy year experience, and they can be used for short intervals, such as monthly or quarterly periods of experience.

In the rate making procedures of the National Bureau and the Mutual Bureau, calendar year average claim cost trend data have been used in recent years to supplement policy year experience. Trends in claim frequencies are reviewed, but they have not actually been used recently, except during the years following World War II.

Calendar year loss experience, at the present time, is obtained from the transaction reports filed by the companies every month on all automobile liability paid losses. From these reports, the National Bureau and the Mutual Bureau summarize the amount of the paid losses and the number of paid claims for each state, separately for bodily injury liability, property damage liability and medical payments.

The method in which average paid claim costs trend factors are calculated from these paid losses is demonstrated below, from the Mutual Bureau's 1954 revision of garage liability rates in the state of Florida. In that revision, the statewide rate level was based upon the experience for policy years 1950 and 1951, which was the latest policy year experience available at that time*.

The average paid claim costs for bodily injury liability were consolidated as follows:

Calendar	*Florida*		
Year Ended	*Paid Losses*	*No. of Claims*	*Avg. Pd. Claim Cost*
12/31/50	$2,321,143	3,970	$585
12/31/51	4,055,706	6,370	637
6/30/52	4,836,673	7,312	661
12/31/52	5,713,903	7,836	729
6/30/53	5,940,703	7,331	810

It is noted that the latest period for which the above data were available was the period ending June 30, 1953. Thus, the year beginning July 1, 1952 and ended June 30, 1953 was the latest calendar year. Assuming that losses are paid at an even rate throughout the year,

* The experience was reported under the 1953 Call, consolidated and reviewed late in 1953, rate filings in almost all states were made early in 1954.

the average claim cost for the year ended June 30, 1953, represents the loss cost at the middle of the period, or January 1, 1953. This average loss cost is compared with the loss costs prevailing during calendar years 1950, 1951 and 1952:

1. Factor to adjust calendar year 1950 to 1/1/53 level:
   $810 ÷ $585 = 1.385
2. Factor to adjust calendar year 1951 to 1/1/53 level:
   $810 ÷ $637 = 1.272
3. Factor to adjust calendar year 1952 to 1/1/53 level:
   $810 ÷ $729 = 1.111

The above calculations show that the loss cost on January 1, 1953 was 38.5% higher than the average for 1950, 27.2% higher than the average for 1951 and 11.1% higher than the average for 1952.

This information can be used for an estimate of the average claim cost for policy year 1950 (the older of the two policy years used for rate level in that revision) on January 1, 1953 loss level. In this connection it is recalled that the incurred losses for policy year 1950, reported "as of December 31, 1952" consist of losses which were paid during the period January 1, 1950 through March 31, 1953 and the losses which were outstanding as of March 31, 1953. The losses paid during the period January 1, 1950 through December 31, 1950 were paid at the loss level then prevailing. If they had been paid at the loss level existing on January 1, 1953, they would have been 38.5% higher. Correspondingly, the policy year 1951 losses paid during the period January 1, 1951 to December 31, 1951 and January 1, 1952 to December 31, 1952 would have been higher by 27.2% and 11.1% respectively if they had been paid at the loss level existing on January 1, 1953.

From distributions of paid losses it was determined that the incurred bodily injury losses for a policy year reported as of 36 months are distributed as follows:

Paid during first calendar year period	12.5%
Paid during second calendar year period	47.5%
Paid during third calendar year period	25.0%
Outstanding as of 36 months	15.0%

Averaging the increases in average paid claim costs during each of the calendar year periods of policy year 1950 reported as of 36 months and using as weights the distribution of loss payments during each period, produces the average increase for the policy year. In this connection, it was assumed that the losses outstanding as of March 31, 1953 needed no adjustment, so that a factor of 1.000 was applied to the outstanding portion of the incurred losses. The average increase is calculated as follows:

$$.125 \times 1.385 + .475 \times 1.272 + .250 \times 1.111 + .150 \times 1.000 = 1.205$$

In the rate revision, a factor of 1.20 was used in lieu of the indicated factor of 1.205, which was a maximum limitation used in the rate program.

Since this trend factor adjusted the experience only to the January 1, 1953 level, while the filing was made early in 1954 for rates to be effective about the middle of 1954, a further adjustment was necessary. This further adjustment is referred to as projection; it is based on the assumption that the increase in average paid claim costs observed for the past periods for which experience is available continued in some measure for the period immediately following. In this case it was assumed that claim cost continued to rise at a rate one half of that prevailing during the latest year, ended June 30, 1953. It was further assumed that this adjustment would reflect the level prevailing on July 1, 1954, the approximate effective date of the rate revision. The calculation of this projection factor is as follows:

$$1.000 + \tfrac{1}{2}\ \frac{\$810 - \$661}{\$661} = 1.113$$

This factor, however, was limited to a proposed maximum projection factor of 1.05.

The product of the projection factor of 1.05 and the trend factor of 1.20 produced the factor of 1.260 to adjust policy year 1950 to the July 1, 1954 loss level.

The same procedure was used to adjust policy year 1951 to the loss level of July 1, 1954 using the appropriate corresponding calendar year periods and distribution of paid losses for a policy year reported as of 24 months.

The factors based upon the experience in the state were further modified by averaging them with corresponding factors calculated from countrywide experience. The weights applied were the credibility given to the state experience and the complement of that credibility given to the countrywide experience. The attached Exhibit I shows the complete calculation of these factors; also shown is the credibility table for use in connection with paid claim cost trend data. The policy year experience is adjusted by multiplying the policy year incurred losses by the respective factors, and these adjusted losses are used for the calculation of the statewide rate level loss ratios.

MUTUAL INSURANCE RATING BUREAU

FLORIDA

Exhibit I
Sheet 1

AUTOMOBILE LIABILITY - 1954 GARAGE RATE REVISION
Development of Factors to Adjust Policy Year
Incurred Losses to 7/1/54 Loss Level
Based upon Calendar Year Average Paid Claim Cost Data

Bodily Injury (Excluding Medical and All Loss Adjustment Expenses)

Combined Experience of Mutual
Bureau and National Bureau (a)

All Types of Cars

Calendar Year Ended	State			Countrywide Excluding Massachusetts		
	Paid Losses	No. of Claims	Avg. Pd. Claim Cost	Paid Losses	No. of Claims	Avg. Pd. Claim Cost
12/31/50	$ 2,321,143	3,970	$ 585	$ 125,800,403	208,471	$ 603
12/31/51	4,055,706	6,370	637	195,026,884	307,791	634
6/30/52	4,836,673	7,312	661	227,078,423	340,965	666
12/31/52	5,713,903	7,836	729	249,475,662	354,535	704
6/30/53	5,940,703	7,331	810	250,729,426	343,372	730

Policy Year	Percent of Policy Year Incurred Losses			
	Paid in Calendar Year Period			Outstanding
	1950	1951	1952	
1950	12.5%	47.5%	25.0%	15.0%
1951	xxx	12.5	47.5	40.0

	State	Country-wide	Formula Factor
Weights Based on States Credibility (See Exhibit II, Sheet 3)	.85	.15	xxx
Factor to Apply to Policy Year 1950 Incurred Losses			
1. Factor to adjust Cal. Yr. 1950 to 1/1/53 Loss Level (b)	1.385	1.211	xxx
2. Factor to adjust Cal. Yr. 1951 to 1/1/53 Loss Level (b)	1.272	1.151	xxx
3. Factor to adjust Cal. Yr. 1952 to 1/1/53 Loss Level (b)	1.111	1.037	xxx
4. Trend Factor to adjust Pol. Yr. 1950 to 1/1/53 Level: [.125 x (1) + .475 x (2) + .250 x (3) + .150 x 1.000]	1.20*	1.107	xxx
5. Factor to Project from 1/1/53 to 7/1/54: $1.000 + 1/2 \frac{[6/30/53 - 6/30/52]\ (c)}{[6/30/52]\ (c)}$	1.05∅	1.048	xxx
6. Factor to adjust Pol. Yr. 1950 to 7/1/54 Loss Level [(4)x(5)]	1.260	1.160	1.245
Factor to Apply to Policy Year 1951 Incurred Losses			
7. Factor to adjust Cal. Yr. 1951 to 1/1/53 Loss Level (b)	1.272	1.151	xxx
8. Factor to adjust Cal. Yr. 1952 to 1/1/53 Loss Level (b)	1.111	1.037	xxx
9. Trend Factor to adjust Pol. Yr. 1951 to 1/1/53 Level [.125 x (7) + .475 x (8) + .400 x 1.000]	1.087	1.036	xxx
10. Factor to Project from 1/1/53 to 7/1/54 (same as line 5 above)	1.05∅	1.048	xxx
11. Factor to adjust Pol. Yr. 1951 to 7/1/54 Loss Level [(9)x(10)]	1.141	1.086	1.133

(a) Maximum experience reported for each year.
(b) Ratios of average paid claim costs for year ended 6/30/53 to average paid claim costs for the particular calendar year.
(c) Average paid claim costs for year ending on dates shown.
* Limited to a maximum factor of 1.20.
∅ Limited to a maximum factor of 1.05.

MUTUAL INSURANCE RATING BUREAU — FLORIDA — Exhibit I Sheet 2

AUTOMOBILE LIABILITY - 1954 GARAGE RATE REVISION
Development of Factors to Adjust Policy Year
Incurred Losses to 7/1/54 Loss Level
Based upon Calendar Year Average Paid Claim Cost Data

Property Damage (Excluding All Loss Adjustment Expenses)

Combined Experience of Mutual Bureau and National Bureau (a) — All Types of Cars

Calendar Year Ended	State			Countrywide Excluding Massachusetts		
	Paid Losses	No. of Claims	Avg. Pd. Claim Cost	Paid Losses	No. of Claims	Avg. Pd. Claim Cost
12/31/50	$ 2,050,006	27,095	$ 76	$ 103,404,980	1,391,071	$ 74
12/31/51	2,624,420	31,635	83	122,839,896	1,468,341	84
6/30/52	3,091,966	35,545	87	141,641,682	1,606,578	88
12/31/52	3,399,123	37,534	91	151,053,845	1,640,347	92
6/30/53	3,318,075	35,115	94	144,466,156	1,497,367	96

Policy Year	Percent of Policy Year Incurred Losses			
	Paid in Calendar Year Period			Outstanding
	1950	1951	1952	
1950	27.5%	57.5%	10.0%	5.0%
1951	xxx	27.5	57.5	15.0

	State	Country-wide	Formula Factor
Weights Based on States Credibility (See Exhibit II, Sheet 3)	1.00	0	xxx
Factor to Apply to Policy Year 1950 Incurred Losses			
1. Factor to adjust Cal. Yr. 1950 to 1/1/53 Loss Level (b)	1.237	1.297	xxx
2. Factor to adjust Cal. Yr. 1951 to 1/1/53 Loss Level (b)	1.133	1.143	xxx
3. Factor to adjust Cal. Yr. 1952 to 1/1/53 Loss Level (b)	1.033	1.043	xxx
4. Trend Factor to adjust Pol. Yr. 1950 to 1/1/53 Level: [.275 x (1) + .575 x (2) + .100 x (3) + .050 x 1.000]	1.145	1.168	xxx
5. Factor to Project from 1/1/53 to 7/1/54: $1.000 + 1/2 \frac{[6/30/53 - 6/30/52] (c)}{[6/30/52] (c)}$	1.040	1.045	xxx
6. Factor to adjust Pol. Yr. 1950 to 7/1/54 Loss Level [(4)x(5)]	1.191	1.221	1.191
Factor to Apply to Policy Year 1951 Incurred Losses			
7. Factor to adjust Cal. Yr. 1951 to 1/1/53 Loss Level (b)	1.133	1.143	xxx
8. Factor to adjust Cal. Yr. 1952 to 1/1/53 Loss Level (b)	1.033	1.043	xxx
9. Trend Factor to adjust Pol. Yr. 1951 to 1/1/53 Level [.275 x (7) + .575 x (8) + .150 x 1.000]	1.056	1.064	xxx
10. Factor to Project from 1/1/53 to 7/1/54 (same as line 5 above)	1.040	1.045	xxx
11. Factor to adjust Pol. Yr. 1951 to 7/1/54 Loss Level [(9)x(10)]	1.098	1.112	1.098

(a) Maximum experience reported for each year.
(b) Ratios of average paid claim costs for year ended 6/30/53 to average paid claim costs for the particular calendar year.
(c) Average paid claim costs for year ending on dates shown.

Mutual Insurance
Rating Bureau

Exhibit I
Sheet 3

AUTOMOBILE LIABILITY

1954 GARAGE RATE REVISION

Credibility Based on Paid Losses

Year Ended 6/30/53 Bodily Injury Paid Losses	Credibility	Year Ended 6/30/53 Property Damage Paid Losses
0 - 18,749	0	0 - 2,499
18,750 - 74,999	.05	2,500 - 9,999
75,000 - 168,749	.10	10,000 - 22,499
168,750 - 299,999	.15	22,500 - 39,999
300,000 - 486,749	.20	40,000 - 62,499
486,750 - 674,999	.25	62,500 - 89,999
675,000 - 918,749	.30	90,000 - 122,499
918,750 - 1,199,999	.35	122,500 - 159,999
1,200,000 - 1,518,749	.40	160,000 - 202,499
1,518,750 - 1,874,999	.45	202,500 - 249,999
1,875,000 - 2,268,749	.50	250,000 - 302,499
2,268,750 - 2,699,999	.55	302,500 - 359,999
2,700,000 - 3,168,749	.60	360,000 - 422,499
3,168,750 - 3,674,999	.65	422,500 - 489,999
3,675,000 - 4,218,749	.70	490,000 - 562,499
4,218,750 - 4,799,999	.75	562,500 - 639,999
4,800,000 - 5,418,749	.80	640,000 - 722,499
5,418,750 - 6,074,999	.85	722,500 - 809,999
6,075,000 - 6,768,749	.90	810,000 - 902,499
6,768,750 - 7,499,999	.95	902,500 - 999,999
7,500,000 and over	1.00	1,000,000 and over

MONTH OF LOSS DEFICIENCY RESERVES FOR AUTOMOBILE BODILY INJURY LOSSES INCLUDING RESERVES FOR INCURRED BUT NOT REPORTED CLAIMS

BY

D. A. TAPLEY

"The subject of reserves for incurred but not reported claims has received very scant consideration in our proceedings, nor is there available to the writer's knowledge any written aspects of the subject."

The above quotation of the opening paragraph of a paper by Mr. Thomas F. Tarbell titled "Incurred But Not Reported Claim Reserves" published in Volume XX, Part II of the Proceedings of the Casualty Actuarial Society dated May 18, 1934, is almost as appropriate today is it was then. During the past twenty years relatively little new information on this subject has been published in the Proceedings of the Society.

The reserve for incurred but not reported claims as described by Mr. Tarbell and also by Mr. Nellas C. Black in a prior report published in the 1927 Proceedings of the Society relates exclusively to such losses. It is of interest to note that neither of these gentlemen advanced the premise that the incurred but not reported claim reserve together with reserves for reported losses would offset the total liability of the company for losses incurred but undisposed. Instead, losses incurred but not reported were recognized as comprising a hidden liability which cannot be evaluated under reserve practices appropriate to reported losses.

In contrast to the reserves for incurred but not reported claims, the concept of the month of loss deficiency reserve, as discussed herein, is based on the premise that all hidden reserve need, whether it result from unreported or reported claims, must be statistically measurable as a segment of the company's total liability for undisposed claims. Under this premise, the total incurred losses for each month of loss will at any time be composed of one or more of the following groups of claims:

(a) Paid losses.
(b) Investigated losses reserved for case values.
(c) Reported losses in the course of investigation.
(d) Unreported losses.

The concept of the month of loss deficiency reserve is principally concerned with the current evaluation of losses in the course of investigation and unreported losses in combination as a single unit of reserve need. The manner in which this may be accomplished under month of loss analyses can best be described in terms of specific data taken from Exhibit I, which shows how we maintain such experience.

The reported incurred losses for the January, 1954, month of loss developed as follows:

Date of Evaluation	*Reported Loss Reserves*	*Cumulative Paid Losses*	*Reported Losses*	*Ratios*
1-31-54	$1,219,985	$43,716	$1,263,701	.478
2-28-54	2,095,646	172,407	2,268,053	.858
3-31-54	2,232,006	314,643	2,546,649	.963
4-30-54	2,181,910	462,841	2,644,751	1.000
5-31-54	2,034,060	600,990	2,635,050	.996
6-30-54	1,898,731	743,371	2,642,102	.999
9-30-54	1,518,285	1,110,081	2,628,366	.994
12-31-54	1,182,510	1,482,498	2,665,008	1.008
3-31-55	947,590	1,707,817	2,655,407	1.004
6-30-55	762,980	1,876,037	2,639,017	.998
9-30-55	649,140	1,928,000	2,577,140	.974

It may be observed that the rates at which losses are reported and investigated together with our opening reserve practice constitute the principal factors which control the early development of reported losses. For this month of loss, the total reported losses after four months of development reach a level that continues to be maintained in subsequent months of development in a relatively stable manner. The exhibits which accompany this report will indicate the extent to which this level of losses is reasonably representative of the final disposed value of such losses for every month of loss. For the moment we shall assume that for each month of loss the reported losses will, after an observable minimum period of development, represent the first reasonably accurate indication of disposed value, including, of course, the effect of any contingency margin maintained in reserves. This minimum period of development, in the above data, is four months. For ease of reference, the end of this minimum period of development will hereafter be called the point of stability, and the reported incurred losses at this point will be called "base" losses.

We may now define deficiency reserves as the amounts by which reported losses are inadequate or "deficient" as compared to base losses at every date of evaluation preceding the point of stability for each month of loss.

The concept of reserve for losses incurred but not reported cannot easily be statistically reconciled to the concept of deficiency reserves, nor, for that matter to the actual development pattern of month of loss experience. Referring again to the January, 1954, month of loss data set forth above, it may be noted that after the fourth month of development any supplemental reserve for incurred but not reported claims appears excessive in terms of total need. As a matter of record, between the dates of April 30, 1954, and September 30, 1955, we received original reports of losses incurred in January of 1954 totalling 129 claims in number and $103,482 of case reserves. An additional reserve of this size at any point during the period stated is clearly not needed because our estimated value of total incurred losses actually declined during the period by the amount of $67,611. This decline resulted from the combined effect of several types of loss transactions. Specifically, new reports, reopened claims and reserve increases were offset by reserve takedowns on paid claims and claims closed without payment.

This interplay of loss transactions occurs during every month of development of every month of loss. Furthermore the reserve for incurred but not reported claims can be seen to have no necessary and consistent relation to the need for deficiency reserves. The deficiency reserve need is solely dependent upon the development pattern of reported losses. The development pattern is in turn principally dependent upon the claim policies of the company.

These general relationships cannot be observed unless the claim policies and procedures of the company can be shown to be reasonably accurate and consistent under statistical analysis. The month of loss experience we have developed for this purpose must be recognized as being the product of our own claim operation. These data may not be assumed to be representative of the operations of any other company.

Exhibit II—Part 1 sets forth the recorded value of reported losses (a) by year of loss for 1953 and prior years and (b) by month of loss for 1954 and 1955 through October, as of the end of every month of development in 1954 and 1955 through October.

It will be noted that our reserves for years of loss 1953 and prior had a very satisfactory development in 1954 and 1955 through October. More importantly it will be seen that for each 1954 and 1955 month of loss shown, the monthly development of reported losses followed a very similar pattern. Specifically, the reported losses after one month of development continued to increase during the second, third and fourth months of development. Thereafter, they displayed at each subsequent month of development a high degree of stability. In other words after four months of development, the reported losses for each month of loss consistently reached a point of stability and on current expectations they may be presumed to represent at that point a reasonably accurate indication of the disposed value of the total incurred losses. Thus "base" losses in our company are usually obtained at the fourth month of development for each month of loss.

Exhibit II—Part 2 sets forth certain ratios derived from Exhibit II—Part 1 data as follows:

A. For years of loss prior to 1954 the ratios shown reflect the monthly development throughout 1954 and 1955 through October of the December 31, 1953, outstandings.

B. For each 1954 and 1955 month of loss shown the ratios represent the relation of reported incurred losses by 1954 and 1955 months of development shown to "base" losses for each such month.

Exhibit III sets forth the development pattern, as described and illustrated in connection with Exhibit II, Part 2, for each state in which we operate. There is one difference. All 1954 months of loss for each state have been combined by month of development to produce these state patterns. At this time we will say only that our larger states produce "base" losses that are reasonably consistent while smaller states do not. In all other respects these by state data are highly erratic. We have not attempted to apply the methods described in this report to individual states for the obvious reasons that our present exposures are too limited to produce satisfactory indications and because there is no need for this type of refinement in the procedures under discussion.

Under some circumstances, "base" losses may not necessarily be a reasonable indication of the disposed value of such losses. No system of analysis will circumvent the effect of strong economic trends on claim values. But based on current and expected conditions, the insurance industry has over the years done a highly creditable job of maintaining sound and consistent case reserves. The concept of "base" losses is dependent upon sound practice in the same manner that is applicable to any kind of reserve evaluation. Any excess or inadequacy in the reserves included in base losses will eventually show up in the subsequent development of the experience. The greatest source of month to month development distortion observed in these data appears to be an occasional tendency reflected in individual state development patterns to be over-sensitive to apparent changes in case reserve values. Sound and consistent procedures for disposing of losses are a prerequisite to any successful method for evaluating reserve needs.

It can be seen that our opening reserve practice has an important influence on the early development of reported losses. Let us again consider the developments of January, 1954, month of loss. The reported losses during the first four months of development and the indicated early deficiencies were:

Month of Development	*Reported Incurred Losses*	*Deficiencies*	*Ratio to "Base" Losses*
1	$1,263,701	$1,381,050	.5222
2	2,268,053	376,698	.1424
3	2,546,649	98,102	.0371
4	2,644,751	—	—

Had the average of the opening reserves been higher, then the indicated deficiency for each of the first three months of development would have been smaller. Had the average of the opening reserves been lower, these deficiencies would have been greater.

As a matter of information our opening reserve practice is to assign a specific factor reserve to each new claim reported. This factor reserve is varied by state and in certain areas it varies within state to recognize the influence of unusual local conditions. These factor reserves run as low as about $500 and as high as about $1,000 per claim. There are two exceptions to this factor reserve practice. If a loss is discovered by an adjuster in the course of an investigation, he is permitted to establish a case value reserve. Similarly, reopened claim reserves are usually based on case values.

In order to observe the influence of our opening reserve practices on the development of reported incurred losses we have separately coded and tabulated several different kinds of important loss transactions. These transactions, which we call "elements" or "components" of loss, are as follows:

(a) Reported losses in number and amount.
(b) Reopened losses in number and amount.
(c) Paid losses in number and amount.
(d) Paid revisions in amount. A paid revision is defined as the difference between the amount of a closing payment and the amount of the reserve so disposed.
(e) Regular revisions in amount. Regular revisions are defined as amounts of reserve changes not resulting from closing payments.
(f) Claims closed without payment in number and amount of disposed reserves.
(g) Reserves in number and amount.

The data obtained from these month of loss tabulations have been combined for each element of loss by month of loss and month of development and related to "base" losses for purposes of comparison. These data are too detailed for inclusion in this report. Their principal indications are summarized as follows.

The great majority of all losses reported within 90 days after occurrence are investigated and reserved on a case basis before the end of the fourth month of development of each month of loss. During this four month period the opening reserves are rapidly replaced by case reserves. Consequently the influence of the opening reserve on the development of incurred losses on report is quickly offset by the influence of reserve revisions and takedowns resulting from the conversion of opening reserves to case values, payments and losses closed without payment.

The opening reserve can be increased or decreased over substantial ranges without creating large distortions in the development pattern of reported incurred losses. Furthermore, such changes in opening reserves are not proportionate in their effect on the outstandings as of the first, second and third month of development. For example, in one test analysis we doubled the opening reserve and still did not remove the deficiency in incurred losses after one month of development. At two and three months of development, however, the reported loss reserves were found to be too high. It is our opinion that the opening reserve level cannot be used to control the development of reported incurred losses during the early months of development so as to uniformly eliminate the need for deficiency reserves.

One final comment on the opening reserve may be of interest. Our company records bodily injury losses on a per accident basis. This tends to minimize the effect of changing the opening reserve as compared to what would occur if claims were counted on a per claimant basis. In addition we record a loss count in the event that a report contains any reasonable indication that injuries have been sustained. This has a dual effect. It gives us a substantial number of reports that will later close without payment. It also somewhat increases the effect of changes in opening reserve levels. Our practices in recording claim count have made it necessary for us to adopt a method for disposing claims to be closed without payment on a continuous and uniform basis. Any other method creates very large distortions in our reserve adequacies from month to month.

If we should use no opening reserve prior to the completion of investigations, our deficiency reserve needs would be much larger. If we should use very large opening reserves we would create excessive indications of incurred losses at the second and third months of development for each month of loss. In the opinion of the writer, the opening reserve should be maintained at that level which will produce minimum indications of deficiency reserve need without creating excessive indications of incurred losses after two and three months of development. This means that our need for deficiency reserves after three months of development should be kept as small as possible. We are not dissatisfied when our statistics occasionally indicate a small credit at this point.

The basic objective of any loss reserve program is to set aside sufficient funds to defray the eventual cost of disposing losses that are currently outstanding, whether they be reported or unreported. Conversely, if our total loss reserves for every immature month and year of loss are wholly adequate at every monthly date of reserve evaluation, the above objective will be achieved. The clear indication of this comment is that the loss reserves for every month of loss should be predicated upon the expected total incurred losses for each such month of loss.

Through the years we, like most companies, have at monthly intervals tabulated our paid and outstanding losses. The total of our reserves for both reported and unreported losses was presumed to represent the company's total liability for undisposed losses at each such monthly date of evaluation. Since these reserves together with paid losses established the current estimate of our total incurred losses by calendar year and by policy year, it is a necessary consequence that they also established our combined total incurred losses by year of loss and by month of loss. Consider the following example:

From Exhibit II—Part 1, the reported losses for the years and months of loss shown may, as of April 30, 1955, be summarized as follows:

Month or Years of Loss	*Reported Incurred Losses*
1954 and Prior	$163,584,547
1955—January	3,023,048
February	2,678,907
March	2,833,488
April	1,768,352

From Exhibit II it may be observed that as of April 30, 1955, the reported losses for the three latest months above were deficient in terms of "base" losses as follows:

Month of Loss	*Deficiency of Reported Losses as of April 30, 1955 As Subsequently Developed*
February, 1955	$ 154,894
March, 1955	509,387
April, 1955	1,684,728
Total	$2,349,009

Assume for the moment that we had no reserve established as of April 30, 1955, to offset these deficiencies. In this case our management report for April of 1955 would have shown $2,349,009 more profit on the current calendar month experience for these months of loss than was justified by subsequent development. An examination of Exhibit II, Part 1 reveals that, in the absence of an appropriate reserve, this entire $2,349,009 would have shown up in the management reports for May, June and July as underwriting losses on the experience for the February, March and April months of loss. In all instances these profits and losses noted would have been entirely fictitious.

We would have completely eliminated these particular "paper" profit and loss distortions in our management reports if our deficiency reserve for these three months of loss had been exactly (a) $2,349,009 as of April 30, 1955, (b) $688,443 as of May 31, 1955, and (c) $34,272 as of June 30, 1955.

As of April 30, 1955, our incurred but not reported claim reserve, which we maintain for purposes of comparison, was $1,849,969. Had this reserve been on our records as of that date, our April, 1955, Management Reports would have contained a "paper" profit of $499,040. This amount would have shown up in our Management Reports during the subsequent months of May and June as a fictitious underwriting loss.

Finally our indicated deficiency reserves of record as of April 30, 1955, were $2,146,637 and the fictitious effects of the inadequacy of this reserve were limited to about $200,000 or only 40% of the distortions that otherwise would have resulted from the incurred but not reported reserve indication.

Distortions in our Management Reports arising from the source described above will also affect our rating data to whatever extent they may exist as of June 30 and December 31 of each year. As a matter of record, the maximum potential distortion as of December 31, 1954, could have affected pure premiums for the last half of that year and the first half of 1955 to the extent of more than 5% in each period. These potential distortions always approximate from 40% to 60% of the total incurred losses for every month of loss. The incurred but not reported reserve, if used, would have created distortions for individual months of loss in 1954 and 1955 through July ranging from a minimum of $11,348 to a maximum of $958,836, and which would have averaged in excess of $450,000 per month. Even on our substantial volume of business, "paper" distortions of such size are highly undesirable.

The best method we have found to date for limiting the effects of these "paper" distortions is to reserve each month of loss as accurately as possible from its inception. This obviously involves the computation of expected "base" losses for each month of loss during the first three months of development. By so doing we obtain a test for adequacy on the total reserves for each month of loss at every stage of development and in the process also obtain a precise check upon our computation of expected "base" losses.

The computation of expected "base" losses by month of loss is at best a somewhat uncertain process. Customary criteria, such as loss frequencies and average claim costs, when applied to month of loss experience, are neither sufficiently developed at the time such data is needed, nor are they sufficiently consistent from one month to another to be of much value in the computation of expected losses for any month of loss during its first, second and third months of development. The criteria which appear to be the most dependable for computing expected "base" losses comprise two principal groups of information. The first relates to accident month data. The second includes all other factors which may from time to time influence the current level of incurred losses. These two groups of criteria shall, for purposes of clarity, be separately discussed as follows.

We have tested a number of methods for computing expected "base" losses for the current month of loss which make use of the experience of prior months. Most of these proved to be unsatisfactory. Furthermore, it is procedurally difficult to obtain fully detailed data appropriate to the current month of loss in the short time available before monthly closing entries must be made. If such detailed data could be available, it is possible to compute expected "base" losses that are relatively accurate. We recognized, in the early stages of our studies, however, that any statistical or formula method which might be developed would of necessity be based on very limited current information. This meant that it would be necessary to test any such method over a fairly long period to determine whether it was equal or superior to accepted practice. The single method which has met this test involves a combination of prior month experience and current month developments on paid and reserved losses. It is described and evaluated as follows.

The only loss element for which we have so far been able to obtain a breakdown by month of loss in advance of monthly closing deadlines is the reported reserve. A review of Exhibit VI-A reveals that the ratios of reported reserves by month of development have given a rather consistent reflection of "base" losses during early development periods. For example:

(a) After one month of development, for thirteen of the nineteen months tested these ratios did not vary from a ratio of .500 by more than .025 points either way.

(b) After two months of development, for fourteen out of the nineteen months tested, the maximum variation from a ratio of .760 was .030 either way.

(c) After three months of development, for fifteen out of nineteen months tested the maximum variation from a ratio of .840 was .040 either way.

By using the ratios of .500, .760 and .840 in connection with reserves at the end of the first, second and third months of development respectively, expected "base" losses were projected and compared to actual "base" losses as shown on Exhibit VII.

The use of the expected "base" losses for obtaining indicated deficiency reserves is described as follows. These expected "base" losses are assumed to consist of (a) cumulative paid losses, (b) reported reserves and (c) needed deficiency reserves. By deducting from expected losses the actual reported reserves and the paid losses, a remainder would be obtained which would represent the indicated deficiency reserve needed. Since paid losses by month of loss are not available before monthly closing entries must be made, we have obtained satisfactory paid loss allowance factors in the same manner reserve factors were obtained.

On éxhibit VIII, the indicated deficiencies are obtained:

(a) After one month of development by reducing expected "base" losses from Exhibit VII by a paid loss allowance of 6% and by the actual month of loss reserve.

(b) After two months of development by reducing such expected losses by an 8% paid loss allowance and by the actual month of loss reserve.

(c) After three months of development by reducing such expected losses by a 12% paid loss allowance and by the actual month of loss reserve.

It can be seen that our selection of the ratios stated above relating to both reported reserves and paid losses has been accomplished as simply as possible. We are handicapped in the determination of maximum ranges of potential fluctuation by the sheer lack of available samples. At the time this report was originally prepared we had only 19 "sample" months available and not all of these were sufficiently developed to be considered reliable. At the present time we have available some 31 "sample" months and of these about 15 are sufficiently developed to be meaningful. This is still a very limited body of experience from which to derive these particular development factors. Nevertheless investigation of such criteria has been started and the results obtained to date are highly encouraging.

On Exhibit VIII, the sum of the deficiencies for the three latest months of loss represents the total indicated deficiency reserve appropriate to each date of evaluation.

Exhibit IX shows the manner in which needed deficiency reserves are retrospectively obtained from developed experience.

Exhibit X sets forth a comparison of (a) deficiency reserves actually needed as shown on Exhibit IX, (b) indicated deficiency reserves developed as shown on Exhibit VIII and (c) indicated reserves for incurred but not reported claims.

It is not pertinent to this report to detail our method for obtaining a record of the incurred but not reported claim reserve. The methods we employ are in keeping with accepted practices. But it may be seen that our reserves for losses incurred but not reported as developed by our company are highly stable in comparison to needed deficiency reserves.

From Exhibit X we may obtain an exact indication of the sufficiency of both IBNR reserves and indicated deficiency reserves in terms of actual need for the period January, 1954, through July, 1955, as follows:

Month, Year of Evaluation	*Variation of IBNR Res. From Actual Need*	*Ratio to Actual Need*	*Variation of Indicated Deficiency Reserve From Actual Need*	*Ratio to Actual Need*
1954, March	—244,827	—.137	—127,960	—.072
April	+22,766	+.015	+247,198	+.160
May	—579,843	—.269	—348,619	—.161
June	—235,653	—.129	+84,249	+.046
July	—324,611	—.166	—83,894	—.043
August	—355,824	—.178	—74,377	—.037
September	—915,029	—.355	—828,993	—.321
October	—935,670	—.357	—618,051	—.236
November	—958,836	—.358	—615,280	—.230
December	—849,523	—.327	—83,624	—.032
1955, January	—440,772	—.198	—59,382	—.027
February	—346,681	—.162	—269,981	—.126
March	—453,788	—.201	—227,030	—.101
April	—499,040	—.212	—202,372	—.086
May	—557,949	—.229	—126,341	—.052
June	—11,348	—.994	+317,194	+.164
July	+129,393	+.071	+521,785	+.287

In summary of the methods described above for computing expected "base" losses by month of loss, they have produced a considerable improvement over the results obtained from our record of needed reserves for losses incurred but not reported. Specifically the extreme range of error of the deficiency reserve has been 14% lower than that of the incurred but not reported claim reserve. Similarly, the average range of error has been about 40% lower for the entire period from January, 1954, through July of 1955.

In the time that has elapsed since this report was originally prepared we have extended the development of data set forth on the exhibits of experience attached hereto through August 31, 1956. In addition corresponding data for the months of October, 1955, through August, 1956, have also become available.

No effort has been made to incorporate these additional data into this report; first, for lack of time and second, because they continue to bear out the indications of the experience already discussed subject to the following additional comments. The reserve level and paid claim factors for the first three months of development as previously described continue to provide very satisfactory indications of total incurred losses on record after four months of development for every month of loss. Thus throughout the entire period from January, 1954, until August of 1956 the methods described in this report for evaluating our hidden reserve needs by month of loss during the early months of development uniformly produce more acceptable results than were previously obtained.

The additional data developed since July of 1955 does reveal a substantial trend toward higher frequencies and also toward higher paid claim costs. The trend of increased frequency apparently has not tended to disturb the uniform development of our accident month data. However the trend toward higher average costs and the accompanying needed higher average reserves on older claims is being reflected in increased indications of total incurred losses which become apparent after the fourth month of development. Specifically the point of stability in our later experience has moved out beyond the fourth month of development and as a result we have increased our deficiency reserves applicable to each month of loss in accordance with the indications obtained. Because of this particular development we are continuing to observe our monthly experience very closely in order that we may introduce adjustments in our procedure to be reflective of developing conditions as promptly as they appear in the experience.

From an over-all standpoint, neither the reserves for losses incurred but not reported nor the indicated deficiency reserves have, as yet, fully reflected the large monthly fluctuations of needed deficiency reserves as noted on Exhibit IX. These fluctuations are a direct result of the large changes that take place in the current level of "base" losses for each succeeding month of loss. The available month of loss statistics used in the computation of expected "base" losses obviously need to be supplemented by factors which will give greater recognition to these large monthly changes in "base" losses by month of loss. These additional factors, which comprise the second group of information previously mentioned, are not readily susceptible of statistical segregation and evaluation. For the present, these factors must be considered as being integral components of sound judgment. For example, the May, 1955, month of loss developed incurred losses that were much lower in proportion to May of 1954 than we had anticipated. Similarly, the December, 1955, month of loss now appears to be much more severe than expected. In the former instance, at least, we did not fully anticipate the effect of the tremendous campaign for highway safety that was carried out over the Decoration Day holiday period. Abrupt changes in public temperament respecting highway safety are difficult to anticipate under any form of statistical analysis.

This second group of "judgment" factors also includes certain components which we have analyzed statistically. For example, long term and year to year comparisons of loss frequencies, average paid claim costs, "base" losses and other items have been productive of useful results. In a general way these kinds of comparisons provide reasonably accurate indications of current month expected "base" losses; but such indications must always be supplemented by indications based on (a) whether or not the current month contains a major holiday, (b) the number of days in the current month, (c) National Safety Council reports and predictions and (d) any other particular factors that can strongly influence the expected losses for the current period. History reveals that various other influencing factors can and do arise, such as the outbreak or threat of war, gasoline rationing, strikes and other occurrences of national interest. We should like to devote a considerable discussion to our findings in relation to all these potential factors of importance. We are restrained from doing so for reasons of brevity and because such findings, being based on data accumulated under our own company procedures, would be of limited interest to other carriers.

In general summary, we are certain that this second group of judgment factors must enter the determination of expected "base" losses. We are also sure that the observation of additional periods of month of loss data now being accumulated, will contribute to a more effective anticipation and evaluation of such "judgment" factors. Long term and seasonal trends will, in our opinion, eventually be at least partly removed from the "judgment" area. The remaining factors which can create very large monthly changes are so few in number and so distinctive from the ordinary that it is not unreasonable to hope that we shall learn how to cope with them more effectively.

The foregoing comments show clearly that no exact method for computing "base" losses is conceivable. Furthermore, the same areas of potential error that plague the determination of expected "base" losses by month of loss also occur with equal force in the determination of total reserves and total incurred losses, whether on a calendar year, policy year or accident year basis, and including any monthly, quarterly or semi-annual segment thereof. A fundamental test of any method for evaluating current reserve need is to determine whether or not such method produces results that are equal or superior to the results of the method it is intended to replace. Our deficiency reserve program has up to the present proved superior to our past practice.

The principal hope for further improvement appears to depend upon four possible developments. First, the expanded use of electronic data processing equipment should make it possible to extend this kind of research into areas that are presently unavailable from a practical standpoint. Second, such equipment may permit the inclusion of additional current month loss element factors into the computation of expected "base" losses by month of loss. Third, the accumulation of month of loss data over a longer period of observation will help remove certain important trend data from the area of judgment. Fourth, additional experience in dealing with the shock effects of major holidays, unusual and abrupt economic influences and the like, may minimize the degrees of error we have encountered from these sources in the past.

There is one important advantage to the employment of the "base" loss concept described herein that is worthy of note even though it is not directly related to the computation of deficiency reserves. One of the great problems in checking upon the adequacy of case reserves is the sheer mass of files that must be handled in any such process. By maintaining a record of case reserves and paid losses by month of loss we can observe the over-all adequacy of such reserves for each month of loss separately. This helps to pinpoint any particular month of loss in which reserves may be developing either excessively or inadequately. Furthermore it may be seen on Exhibit XIV that after six months of development, only a very small proportion of the total number of reported losses for each month of loss remain as open claims. Thus, very early in the development of any individual month of loss, it is possible to review the adequacy of total reserves for such month in any single state and this process will involve the handling of only a limited number of files in proportion to the total number of cases pending at any given time.

We believe that a continued effort to improve the accuracy of our reserve procedures is mandatory for many reasons. From the standpoint of administration, it has been stated that we compile a calendar month record of experience by state and by coverage which is used by management to aid in carrying out its many functions. Unless this report is as accurate as possible it can be of only limited value. The underwriting gain and loss data set forth thereon is substantially influenced by the accuracy of reserves. If such data are allowed to become misleading, they also become potentially harmful.

From the standpoint of rating data, the accuracy of reserves is of great importance. Consider for a moment the results that would have been obtained from our record of needed reserves for losses incurred but not reported. Had this reserve been in use as of June 1, 1954, it would have proved to be about $235,000 inadequate for total need and as of December 31, 1955, it would have proved to be inadequate by almost $850,000. These inadequacies would have shown up as "paper" profits in the current management reports for these months. More importantly they also would have reduced the pure premiums for the first half and second half of 1953 experience periods below a correct indication. Finally, the pure premiums for the next subsequent periods of experience would have been inflated to a corresponding degree. These effects would have been severe because $235,000 is about 35% of the expected underwriting gain for the entire first half of 1954. The $850,000 inadequacy is over 100% of the expected underwriting gain during the last six months of that year.

As serious as these actual and potential distortions appear, they are not believed to be peculiar to our company. By every publicized test, our loss disposal procedures produce results that compare favorably to industry averages. We, therefore, believe that these distortions principally serve to emphasize the inherent difficulties of loss reserve procedures in general.

The procedures we have described in this report are not new. We have simply extended the usual concept for testing reserve adequacy by year of loss to month of loss experience. We have used the earliest reasonable indication of actual incurred losses by month of loss as a base for computing reserve adequacy. In this respect our concept of "base" losses is no different from the concept of "incurred losses" used for testing adequacy on a year of loss basis, or from the concept of total incurred losses used in developing pure premium and loss ratio information. The accuracy of any method for obtaining an acceptable estimate of "base" losses will be dependent upon the same operational factors that underlie the accuracy of total incurred losses on either a calendar year, an accident year or a policy year basis of analysis.

In working with month of loss data we have found that such data separates the total area of loss reserve needs into conveniently sized packages which can be analyzed and interpreted in terms of operations and procedures. In our application of these data to the problem of our hidden reserve needs we have so far obtained an important "average" improvement over other methods available for this purpose. This has been accomplished even though we have had only a bare minimum of information and experience on which to rely. For this reason, we anticipate that the specific method we now use to develop deficiency reserves will be considerably revised and improved in the future.

EXHIBIT I
COMPANYWIDE MONTH OF LOSS DEVELOPMENT DATA
JANUARY, 1954, MONTH OF LOSS

	OUTSTANDING		REPORTED		REOPENED		PAID		PD REVISIONS	RES. REVISIONS	CWP		OUTSTANDING		TOTAL INCURRED
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	AMOUNT	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	LOSSES
1954 Jan.			2,129	1,417,536			322	43,716	133,150	-18,250	81	39,150	1,720	1,219,985	1,263,701
Feb.	1,720	1,219,985	1,510	941,699	1	550	832	128,691	298,169	-575,495	422	212,075	1,974	2,095,646	2,268,053
Cumulative			3,639	2,359,235	1	550	1,154	172,407	431,319	-593,745	503	251,225			
March	1,974	2,095,646	233	111,526	11	6,900	484	142,236	201,759	-519,150	291	140,965	1,437	2,232,006	2,546,649
Cumulative			3,872	2,470,761	12	7,450	1,638	314,643	633,078	-1,112,895	794	392,190			
April	1,437	2,232,006	90	40,327	8	3,860	273	148,198	155,210	-279,340	150	76,900	1,108	2,181,910	2,644,751
Cumulative			3,962	2,511,088	20	11,310	1,911	462,841	788,288	-1,392,235	944	469,090			
May	1,108	2,181,910	28	28,371	12	10,135	159	138,149	112,437	-132,525	86	64,020	908	2,034,060	2,635,050
Cumulative			3,990	2,539,459	32	21,445	2,070	600,990	900,725	-1,524,760	1,030	533,110			
June	908	2,034,060	20	12,706	5	3,600	133	142,381	100,335	-138,086	68	47,580	731	1,898,731	2,642,102
Cumulative			4,010	2,552,165	37	25,045	2,203	743,371	1,001,060	-1,662,846	1,098	580,690			
July	731	1,898,731	23	11,230	11	10,170	94	124,704	111,510	-116,574	42	34,630	627	1,768,600	2,636,675
Cumulative			4,033	2,563,395	48	35,215	2,297	868,075	1,112,570	-1,779,420	1,140	615,320			
August	627	1,768,600	9	5,745	2	2,050	56	111,331	13,774	-102,555	34	20,560	547	1,737,615	2,717,021
Cumulative			4,042	2,569,140	50	37,265	2,353	979,406	1,126,344	-1,881,975	1,174	635,880			
Sept.	547	1,737,615	4	6,300	4	1,730	68	130,675	86,005	-31,480	36	39,910	451	1,518,285	2,628,366
Cumulative			4,046	2,575,440	54	38,995	2,421	1,110,081	1,212,349	-1,913,455	1,210	675,790			
Oct.	451	1,518,285	6	12,240	3	7,050	51	116,456	79,139	-42,710	12	11,820	397	1,372,870	2,599,407
Cumulative			4,052	2,587,680	57	46,045	2,472	1,226,537	1,291,488	-1,956,165	1,222	687,610			
Nov.	397	1,372,870	10	12,270	8	14,800	41	94,038	47,392	-83,690	6	5,890	368	1,336,310	2,656,885
Cumulative			4,062	2,599,950	65	60,845	2,513	1,320,575	1,338,880	-2,039,855	1,228	693,500			
Dec.	368	1,336,310	6	3,030	3	4,680	45	161,923	72,737	-68,950	10	13,300	322	1,182,510	2,665,008
Cumulative			4,068	2,602,980	68	65,525	2,558	1,482,498	1,411,617	-2,108,805	1,238	706,800			
1955 Jan.	322	1,182,510	15	11,970	2	700	34	87,130	46,030	-54,530	11	11,300	293	1,104,050	2,673,678
Cumulative			4,083	2,614,950	70	66,225	2,592	1,569,628	1,457,647	-2,163,335	1,249	718,100			
Feb.	293	1,104,050	5	3,170	5	5,700	20	56,025	36,795	-50,210	12	12,060	271	1,058,550	2,684,203
Cumulative			4,088	2,618,120	75	71,925	2,612	1,625,653	1,494,442	-2,213,545	1,261	730,160			
March	271	1,058,550	2	-470	4	2,550	31	82,164	30,646	-3,010	6	3,240	240	947,590	2,655,407
Cumulative			4,090	2,617,650	79	74,475	2,643	1,707,817	1,525,088	-2,216,555	1,267	733,400			
April	240	947,590	2	720	3	3,150	11	44,190	29,330	-45,110	5	9,680	229	912,470	2,664,477
Cumulative			4,092	2,618,370	82	77,625	2,654	1,752,007	1,554,418	-2,269,665	1,272	743,080			
May	229	912,470	-1	-450	3	2,510	14	29,789	60,791	-25,420	8	7,950	209	841,420	2,623,216
Cumulative			4,091	2,617,920	85	80,135	2,668	1,781,796	1,615,209	-2,287,085	1,280	751,030			
June	209	841,420			6	8,470	17	94,241	-20,976	-21,950	9	17,570	188	762,980	2,639,017
Cumulative			4,091	2,617,920	91	88,605	2,685	1,876,037	1,594,233	-2,309,035	1,289	768,600			
July	188	762,980	1	550	1	1,100	15	23,737	21,438	-5,700	5	4,050	171	721,130	2,620,904
Cumulative			4,092	2,618,470	92	89,705	2,700	1,899,774	1,615,671	-2,314,735	1,294	772,650			
August	171	721,130	—	—	2	1,150	8	30,355	8,045	-13,280	4	1,550	161	695,610	2,625,739
Cumulative			4,092	2,618,470	94	90,855	2,708	1,930,129	1,623,716	-2,328,015	1,298	774,200			
Sept.	161	695,610	-1	-3,900	-	—	9	-2,129	40,329	-580	8	11,080	144	649,140	2,577,140
Cumulative			4,091	2,614,570	94	90,855	2,717	1,928,000	1,663,955	-2,328,595	1,306	785,280			

MO. YR. OF LOSS	1954 MONTH OF DEVELOPMENT AS OF JAN. 31	AS OF FEB. 28	AS OF MARCH 31	AS OF APRIL 30	AS OF MAY 31	AS OF JUNE 30	AS OF JULY 31	AS OF AUG. 31	AS OF SEPT. 30	AS OF OCT. 31	AS OF NOV. 30	AS OF DEC. 31
1945	$6,826,301	6,826,301	6,826,301	6,826,301	6,826,301	6,823,951	6,824,601	6,825,651	6,823,951	DISPOSED		
1946	10,852,529	10,855,029	10,855,029	10,855,029	10,848,529	10,855,529	10,855,529	10,855,529	10,855,529	10,854,949	10,854,949	10,855,879
1947	10,131,394	10,132,894	10,144,844	10,146,144	10,137,644	10,137,644	10,137,644	10,128,644	10,121,744	10,121,744	10,124,079	10,114,554
1948	9,248,102	9,248,102	9,248,023	9,248,133	9,247,131	9,251,971	9,262,007	9,260,007	9,268,907	9,267,157	9,265,907	9,265,907
1949	10,521,334	10,541,710	10,494,223	10,528,473	10,526,944	10,519,672	10,526,222	10,534,072	10,518,297	10,515,167	10,513,925	10,508,225
1950	14,238,522	14,202,828	14,245,334	14,206,042	14,216,793	14,187,723	14,168,118	14,145,568	14,131,695	14,121,843	14,101,913	14,106,988
1951	18,799,005	18,770,534	18,720,390	18,618,712	18,601,118	18,574,174	18,541,870	18,571,498	18,509,776	18,481,688	18,433,042	18,417,630
1952	25,526,206	25,449,639	25,369,869	25,217,640	25,033,524	24,948,224	24,799,334	24,716,133	24,556,473	24,447,579	24,385,497	24,355,604
1953	31,453,440	31,656,484	31,823,843	31,890,230	31,476,422	31,198,966	31,172,765	31,141,208	30,905,865	30,631,809	30,591,812	30,676,965
Jan. 1954	1,263,701	2,268,053	2,546,649	2,644,751	2,635,050	2,642,102	2,636,675	2,717,021	2,628,366	2,599,407	2,656,885	2,665,008
Feb.		1,104,324	2,174,887	2,482,940	2,601,345	2,601,193	2,665,468	2,699,506	2,669,328	2,623,083	2,612,527	2,723,139
March			1,333,659	2,197,983	2,467,379	2,592,144	2,453,086	2,442,311	2,399,785	2,372,619	2,419,084	2,487,945
April				1,493,557	2,198,519	2,450,138	2,529,150	2,566,015	2,554,598	2,548,063	2,569,446	2,596,250
May					1,484,658	2,786,844	3,114,796	3,187,757	3,177,630	3,213,821	3,228,301	3,261,106
June						1,465,267	2,479,823	2,714,010	2,808,420	2,583,511	2,584,331	2,616,428
July							1,502,554	2,544,088	2,864,570	3,052,252	3,133,592	3,263,238
Aug.								1,552,432	2,380,826	2,757,133	2,947,794	3,095,192
September									1,380,407	2,664,032	2,916,524	3,204,539
October										1,636,869	2,805,534	3,386,090
November											1,637,852	2,781,954
December												2,151,382

EXHIBIT II -- PART 1

TOTAL REPORTED INCURRED LOSSES BY MONTH AND YEAR OF LOSS BY MONTH OF DEVELOPMENT

MO. YR. OF LOSS	1955 MONTH OF DEVELOPMENT AS OF JAN. 31	AS OF FEB. 28	AS OF MARCH 31	AS OF APRIL 30	AS OF MAY 31	AS OF JUNE 30	AS OF JULY 31	AS OF AUG. 31	AS OF SEPT. 30	AS OF OCT. 31
1946	$10,855,897	10,855,897	10,855,897	10,855,897	10,855,897	10,855,897	10,855,897	10,855,897	10,854,397	10,854,397
1947	10,108,354	10,108,354	10,127,754	10,127,754	10,126,316	10,127,416	10,127,414	10,127,414	10,127,414	10,125,589
1948	9,265,907	9,252,407	9,248,007	9,239,727	9,239,727	9,243,417	9,247,417	9,246,477	9,241,247	9,241,247
1949	10,493,775	10,489,282	10,475,991	10,474,691	10,465,636	10,470,886	10,475,521	10,475,597	10,475,447	10,482,947
1950	14,089,946	14,071,662	14,065,846	14,075,066	14,070,897	14,068,866	14,076,382	14,063,912	14,077,432	14,053,692
1951	18,416,100	18,385,950	18,384,147	18,378,883	18,363,255	18,342,373	18,341,390	18,323,779	18,306,453	18,288,986
1952	24,328,736	24,253,073	24,234,342	24,196,663	24,127,720	24,077,119	24,038,097	23,967,541	23,932,674	23,906,567
1953	30,524,004	30,324,063	30,040,693	29,931,311	29,740,340	29,685,222	29,567,992	29,499,283	29,271,135	29,199,391
Jan. 1954	2,673,678	2,684,203	2,655,407	2,664,477	2,623,216	2,639,017	2,620,904	2,625,739	2,577,140	2,622,603
Feb.	2,697,851	2,644,964	2,664,442	2,642,876	2,620,002	2,620,211	2,588,918	2,597,223	2,540,062	2,536,748
March	2,492,845	2,460,746	2,387,316	2,435,574	2,423,694	2,426,008	2,429,658	2,450,017	2,466,938	2,472,010
April	2,590,469	2,566,450	2,551,261	2,573,119	2,578,847	2,617,945	2,584,451	2,556,782	2,542,357	2,539,140
May	3,280,640	3,286,983	3,277,364	3,222,893	3,192,748	3,181,788	3,161,037	3,146,476	3,143,340	3,091,457
June	2,644,353	2,642,188	2,658,881	2,652,736	2,640,238	2,628,122	2,585,764	2,572,227	2,524,923	2,512,705
July	3,297,700	3,321,984	3,285,888	3,360,213	3,363,347	3,379,435	3,362,691	3,321,361	3,272,874	3,265,658
August	3,165,553	3,137,312	3,181,661	3,112,115	3,092,328	3,074,609	3,054,272	3,045,830	3,007,194	2,997,952
Sept.	2,992,110	2,946,477	2,882,143	2,857,301	2,865,700	2,852,834	2,827,410	2,786,733	2,749,372	2,752,667
Oct.	3,522,904	3,552,765	3,493,700	3,462,124	3,506,949	3,518,584	3,564,511	3,524,490	3,423,799	3,447,783
Nov.	3,201,317	3,313,348	3,320,616	3,387,128	3,430,182	3,428,914	3,393,263	3,391,475	3,394,799	3,344,664
Dec.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

EXHIBIT II -- PART 1

TOTAL REPORTED INCURRED LOSSES BY MONTH AND YEAR OF LOSS BY MONTH OF DEVELOPMENT

MONTH OF LOSS	YEAR	1955 MONTH OF DEVELOPMENT AS OF JAN. 31	AS OF FEB. 28	AS OF MARCH 31	AS OF APRIL 30	AS OF MAY 31	AS OF JUNE 30	AS OF JULY 31	AS OF AUGUST 31	AS OF SEPT. 30	AS OF OCT. 31
January	1955	1,640,277	2,504,871	2,909,320	3,023,048	3,106,836	3,185,923	3,197,976	3,128,854	3,089,401	3,127,097
February			1,443,445	2,307,133	2,678,907	2,833,801	2,879,850	2,942,358	2,893,034	2,867,091	2,914,095
March				1,727,204	2,833,488	3,254,682	3,342,875	3,303,533	3,264,553	3,193,255	3,194,187
April					1,768,352	2,852,830	3,418,808	3,453,080	3,403,230	3,331,743	3,442,197
May						1,787,151	2,968,077	3,462,319	3,540,405	3,447,648	3,589,715
June							1,927,384	2,985,234	3,358,565	3,253,690	3,361,835
July								2,091,257	3,088,276	3,356,823	3,562,085
August									2,290,943	2,972,425	3,483,083
September										1,792,541	2,842,584
October											2,454,327

EXHIBIT II -- PART 2

RATIO OF REPORTED INCURRED LOSSES BY MONTH AND YEAR OF LOSS AND MONTH OF DEVELOPMENT TO BASE*

MONTH OF LOSS	YEAR	1954 MONTH OF DEVELOPMENT AS OF JAN. 31	AS OF FEB. 28	AS OF MARCH 31	AS OF APRIL 30	AS OF MAY 31	AS OF JUNE 30	AS OF JULY 31	AS OF AUGUST 31	AS OF SEPT. 30	AS OF OCT. 31	AS OF NOV. 30	AS OF DEC. 31
	1945	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		DISPOSED	
	1946	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	1947	1.000	1.000	1.001	1.001	1.001	1.001	1.001	1.001	.999	.999	.999	.998
	1948	1.000	1.000	1.000	1.000	1.000	1.000	1.002	1.001	1.002	1.002	1.002	1.002
	1949	1.001	1.002	.997	1.001	1.001	1.000	1.000	1.001	1.001	.999	.999	.999
	1950	1.001	.997	1.000	.998	.998	.996	.996	.993	.992	.992	.990	.991
	1951	.999	.998	.996	.990	.989	.988	.986	.988	.985	.983	.981	.980
	1952	1.002	.997	.994	.988	.981	.977	.972	.968	.962	.958	.955	.954
	1953	.997	1.006	1.012	1.014	1.001	.992	.991	.990	.983	.974	.973	.975
January	1954	.478	.858	.963	1.000	.996	.999	.997	1.027	.994	.983	1.005	1.008
February			.425	.836	.954	1.000	1.003	1.025	1.038	1.026	1.008	1.004	1.047
March				.515	.848	.952	1.000	.946	.942	.926	.915	.933	.960
April					.591	.869	.969	1.000	1.015	1.010	1.007	1.016	1.027
May						.466	.874	.977	1.000	.997	1.008	1.013	1.023
June							.552	.883	.966	1.000	.920	.920	.932
July								.489	.834	.939	1.000	1.027	1.069
August									.527	.808	.935	1.000	1.050
September										.431	.831	.910	1.000
October											.465	.796	.961
November												.494	.840
December													.527

*Base is: Total Incurred Losses as of December 31, 1953, for each year of loss.
Total Incurred Losses after four months of development for each month of loss.

EXHIBIT II -- Part 2

RATIO OF REPORTED INCURRED LOSSES BY MONTH AND YEAR OF LOSS AND MONTH OF DEVELOPMENT TO BASE*

MONTH OF LOSS	YEAR	1955 MONTH OF DEVELOPMENT AS OF JAN. 31	AS OF FEB. 28	AS OF MARCH 31	AS OF APRIL 30	AS OF MAY 31	AS OF JUNE 30	AS OF JULY 31	AS OF AUGUST 31	AS OF SEPT. 30	AS OF OCT. 31
	1946	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	1947	.999	.999	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001
	1948	1.000	.999	.998	.997	.997	.998	.998	.999	.997	.997
	1949	.999	.998	.997	.997	.996	.996	.997	.997	.997	.998
	1950	.999	.997	.997	.998	.997	.997	.998	.997	.998	.996
	1951	1.000	.998	.998	.998	.998	.996	.996	.995	.994	.993
	1952	.999	.996	.995	.993	.991	.989	.987	.984	.983	.982
	1953	.995	.988	.979	.976	.969	.968	.964	.962	.954	.952
January	1954	1.011	1.015	1.004	1.007	.992	.998	.991	.993	.974	.992
February		1.037	1.017	1.024	1.016	1.007	1.007	.995	.998	.976	.975
March		.962	.949	.921	.940	.935	.936	.937	.945	.952	.954
April		1.024	1.015	1.009	1.017	1.020	1.035	1.022	1.011	1.005	1.004
May		1.029	1.031	1.028	1.011	1.002	.998	.992	.987	.986	.970
June		.942	.941	.947	.945	.940	.936	.921	.916	.899	.895
July		1.080	1.088	1.077	1.101	1.102	1.107	1.102	1.088	1.072	1.070
August		1.074	1.064	1.079	1.056	1.049	1.043	1.036	1.033	1.020	1.017
September		.934	.919	.899	.892	.894	.890	.882	.870	.858	.859
October		1.000	1.008	.992	.983	.995	.999	1.012	1.000	.972	.979
November		.966	1.000	1.002	1.022	1.035	1.035	1.024	1.024	1.025	1.009
December		.821	.943	1.000	.964	.974	1.007	1.019	1.007	.969	.981

*Base is: Total incurred losses as of December 31, 1954 for each year of loss.
Total incurred losses after four months of development for each month of loss.

EXHIBIT II -- PART 2

RATIO OF REPORTED INCURRED LOSSES BY MONTH AND YEAR OF LOSS BY MONTH OF DEVELOPMENT TO BASE*

MONTH OF LOSS	YEAR	1955 MONTH OF DEVELOPMENT AS OF JAN. 31	AS OF FEB. 28	AS OF MARCH 31	AS OF APRIL 30	AS OF MAY 31	AS OF JUNE 30	AS OF JULY 31	AS OF AUGUST 31	AS OF SEPT. 30	AS OF OCT. 31
January	1955	.543	.829	.963	1.000	1.028	1.054	1.058	1.035	1.022	1.035
February			.509	.814	.945	1.000	1.016	1.038	1.021	1.012	1.028
March				.517	.848	.974	1.000	.988	.977	.955	.956
April					.512	.826	.990	1.000	.986	.965	.997
May						.505	.838	.978	1.000	.974	1.014
June							.592	.917	1.032	1.000	1.033
July								.587	.867	.942	1.000
August											
September											
October											

*Base is: Total incurred losses after four months of development for each month of loss.

EXHIBIT III

TOTAL REPORTED INCURRED LOSSES BY STATE - ALL 1954 MONTHS OF LOSS COMBINED BY MONTH OF DEVELOPMENT AND EXPRESSED AS RATIOS TO COMBINED "BASE" LOSSES.

MONTH OF DEVELOPMENT	A	AA	B	BB	C	CC	D	DD	E	EE	F	FF	G	GG	H	HH
1	.592	.596	.687	.496	.453	.503	.590	.725	.501	.383	.476	.547	.391	.473	.419	.606
2	.900	1.184	1.031	.895	.839	.699	1.007	1.082	.715	.827	.779	.805	.871	.846	.696	1.133
3	.963	1.012	1.050	.996	.895	.866	1.021	1.001	.976	.878	.903	.834	.990	1.008	.905	.790
4	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5	1.023	.977	.958	.981	1.027	.962	.962	.959	1.102	.976	.987	1.027	.924	.956	.971	1.148
6	1.049	.957	.966	.920	.951	.944	.963	.985	1.150	.913	.984	1.012	.821	.921	.926	1.088

MONTH OF DEVELOPMENT	I	II	J	JJ	K	KK	L	LL	M	MM	N	NN	O	OO	P	Q
1	.600	.498	.509	.489	.303	.460	.466	.399	.298	.410	.478	.503	.820	.512	.431	.340
2	.846	1.327	.767	.867	.694	.843	1.014	.873	.792	.823	.963	.859	1.178	.924	.872	.628
3	1.001	1.267	.886	1.029	.894	.934	1.066	.992	.912	.943	.969	.939	1.137	.996	.976	.888
4	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5	1.067	.686	.918	.983	1.061	1.061	.846	.953	.951	.991	.866	.969	1.020	.993	.969	.975
6	1.069	.659	.939	.926	1.037	1.084	.853	1.123	.882	1.015	.871	.977	1.019	.992	.949	.939

MONTH OF DEVELOPMENT	R	S	T	U	V	W	X	Y	Z	COMPANYWIDE
1	.538	.438	.519	.556	.533	.392	.551	.463	.419	.493
2	.827	.860	.812	.889	.832	.705	.794	.773	.769	.840
3	.989	.958	.913	.993	.971	.867	.968	1.009	.928	.953
4	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5	.994	.975	.977	.968	.992	.980	.950	.998	.946	.988
6	1.013	.966	.995	.986	1.015	.938	.996	.941	.938	.996

EXHIBIT IV

NUMBER OF PAID LOSSES BY MONTH OF LOSS AND MONTH OF DEVELOPMENT
JANUARY, 1954, TO OCTOBER, 1955, INCLUSIVE
COMPANYWIDE

MONTH OF DEVELOPMENT	1954 MONTH OF LOSS											
	January	February	March	April	May	June	July	August	September	October	November	December
1	322	294	420	442	406	436	430	470	547	523	459	631
2	832	732	992	824	1,040	1,436	1,057	1,047	1,209	1,024	1,049	1,377
3	484	375	398	445	484	475	491	471	446	537	456	525
4	273	191	424	213	315	325	246	243	42	254	241	349
5	159	180	-144	162	220	-235	149	179	-155	187	192	-1
6	133	91	20	132	131	70	134	121	114	153	126	99
7	94	75	70	87	86	76	86	99	89	117	101	128
8	56	66	61	64	89	46	50	74	69	78	88	67
9	68	61	39	63	58	55	60	75	57	78	52	87
10	51	40	52	34	46	42	57	58	70	51	63	77
11	41	35	26	38	61	51	35	50	33	55	71	60
12	45	39	24	41	50	36	38	30	40	60	56	
13	34	28	36	24	40	41	36	44	55	58		
14	20	29	22	26	20	29	33	39	20			
15	31	17	19	16	21	16	32	25				
16	11	16	19	20	29	33	18					
17	14	14	6	18	34	21						
18	17	19	9	20	18							
19	15	14	17	13								
20	8	17	10									
21	9	19										
22	14											
CURRENT TOTAL	2,731	2,352	2,520	2,682	3,148	2,953	2,952	3,025	2,936	3,175	2,954	3,399

EXHIBIT IV

NUMBER OF PAID LOSSES BY MONTH OF LOSS AND MONTH OF DEVELOPMENT
JANUARY, 1954, TO OCTOBER, 1955, INCLUSIVE
COMPANYWIDE

MONTH OF DEVELOPMENT	1955 MONTH OF LOSS									
	January	February	March	April	May	June	July	August	September	October
1	483	403	567	519	598	815	875	1,017	1,271	1,050
2	1,007	1,015	1,204	1,050	1,134	866	943	1,071	568	
3	488	375	421	452	491	525	612	475		
4	232	231	139	271	328	387	242			
5	147	154	70	199	283	166				
6	138	104	120	170	105					
7	95	104	134	86						
8	77	116	100							
9	93	43								
10	43									
CURRENT TOTAL	2,803	2,545	2,755	2,747	2,939	2,759	2,672	2,563	1,839	1,050

EXHIBIT V

AMOUNT OF PAID LOSSES BY MONTH OF LOSS AND MONTH OF DEVELOPMENT
JANUARY, 1954, TO OCTOBER, 1955, INCLUSIVE
COMPANYWIDE

MONTH OF DEVELOPMENT	1954 MONTH OF LOSS											
	January	February	March	April	May	June	July	August	September	October	November	December
1	$ 43,716	27,934	51,434	40,054	31,164	34,829	38,456	47,892	48,647	55,049	45,932	73,693
2	128,691	102,358	196,204	107,228	163,688	328,715	156,961	150,379	279,090	152,166	158,255	269,135
3	142,236	133,478	141,545	142,812	143,256	143,224	183,694	137,581	117,166	178,266	136,772	227,415
4	148,198	129,500	240,025	120,077	158,168	164,123	140,771	151,317	292,260	151,358	125,936	294,329
5	138,149	178,662	-46,169	103,648	178,569	-41,169	168,050	184,911	-74,269	141,589	167,463	79,040
6	142,381	125,801	97,722	165,279	114,386	129,386	183,146	177,787	149,198	166,875	174,447	140,180
7	124,704	100,308	98,894	131,125	151,640	191,719	175,377	126,145	149,890	182,938	197,972	218,291
8	111,331	113,922	129,519	123,733	229,725	96,130	71,669	168,819	125,265	166,058	139,857	123,977
9	130,675	159,300	116,320	99,774	126,609	90,895	132,144	149,786	90,662	162,778	83,484	162,334
10	116,456	60,664	134,731	70,404	140,363	76,386	119,295	161,881	157,030	108,799	115,397	176,552
11	94,038	86,352	49,770	92,821	156,681	151,639	149,749	128,790	107,021	106,969	199,084	206,692
12	161,923	152,277	75,236	135,821	146,364	97,811	105,393	89,278	86,643	140,179	225,735	
13	87,130	82,943	101,420	78,821	112,850	75,149	113,246	94,949	66,354	179,634		
14	56,025	81,238	59,858	108,005	89,830	59,657	99,420	91,874	74,670			
15	82,164	53,279	71,140	68,498	102,969	49,923	73,963	85,398				
16	44,190	80,296	49,794	48,471	50,179	63,241	75,744					
17	29,789	37,089	16,950	41,971	75,819	88,872						
18	94,241	51,952	31,919	35,815	46,027							
19	23,737	48,705	27,857	32,043								
20	30,335	51,334	38,731									
21	-2,129	54,251										
22	53,213											
CURRENT TOTAL	$1,982,213	1,911,643	1,682,900	1,746,400	2,218,287	1,800,530	1,987,078	1,946,787	1,669,627	1,892,658	1,770,334	1,971,638

EXHIBIT V

AMOUNT OF PAID LOSSES BY MONTH OF LOSS AND MONTH OF DEVELOPMENT
JANUARY, 1954, TO OCTOBER, 1955, INCLUSIVE
COMPANYWIDE

MONTH OF DEVELOPMENT	1955 MONTH OF LOSS									
	January	February	March	April	May	June	July	August	September	October
1	$ 51,852	50,237	66,035	43,584	50,135	194,609	250,027	212,783	315,421	279,081
2	138,045	139,303	317,827	162,071	166,825	74,520	36,126	101,503	-36,925	
3	170,055	113,636	151,687	147,674	157,070	189,828	207,879	188,551		
4	131,355	138,459	143,338	169,944	188,141	217,563	153,913			
5	112,454	137,889	40,403	180,922	272,442	127,135				
6	175,732	146,868	129,008	183,288	137,822					
7	144,468	162,496	154,477	168,589						
8	117,953	148,748	199,752							
9	141,852	159,459								
10	125,736									
CURRENT TOTAL	$1,309,502	1,197,095	1,202,527	1,056,072	972,435	803,655	647,945	502,837	278,496	

EXHIBIT V A

RATIOS OF PAID LOSSES BY MONTH OF LOSS AND MONTH OF DEVELOPMENT TO "BASE"* LOSSES
JANUARY, 1954, TO OCTOBER, 1955, INCLUSIVE
COMPANYWIDE

MONTH OF DEVELOPMENT	1954 MONTH OF LOSS											
	January	February	March	April	May	June	July	August	September	October	November	December
1	.017	.011	.020	.016	.010	.012	.013	.016	.015	.016	.014	.018
2	.049	.039	.076	.042	.051	.117	.051	.051	.087	.043	.048	.066
3	.054	.051	.055	.056	.045	.051	.060	.047	.037	.051	.041	.056
4	.056	.050	.093	.047	.050	.058	.046	.051	.091	.043	.038	.072
5	.052	.069	-.018	.041	.056	-.015	.055	.063	-.023	.040	.051	.019
6	.054	.048	.038	.065	.036	.046	.060	.060	.047	.047	.053	.034
7	.047	.039	.038	.052	.048	.068	.057	.043	.047	.052	.060	.053
8	.042	.044	.050	.049	.072	.034	.023	.057	.039	.047	.042	.030
9	.049	.061	.045	.039	.040	.032	.043	.051	.028	.046	.025	.040
10	.044	.023	.052	.028	.044	.272	.039	.055	.049	.031	.035	.043
11	.036	.033	.019	.037	.049	.054	.049	.044	.033	.030	.060	.051
12	.061	.059	.029	.054	.046	.035	.035	.030	.027	.040	.068	
13	.033	.032	.039	.031	.035	.027	.037	.032	.021	.051		
14	.021	.031	.023	.043	.028	.021	.033	.031	.023			
15	.031	.020	.027	.027	.032	.018	.024	.029				
16	.017	.031	.019	.019	.016	.023	.025					
17	.011	.014	.007	.017	.024	.032						
18	.035	.020	.012	.014	.011							
19	.009	.019	.011	.013								
20	.011	.020	.015									
21	-.001	.021										
22	.020											
CURRENT TOTAL	.749	.735	.649	.691	.696	.641	.651	.660	.521	.537	.534	.483

*Base losses are total reported losses for each month after four months of development.

EXHIBIT V A

RATIOS OF PAID LOSSES BY MONTH OF LOSS AND MONTH OF DEVELOPMENT TO "BASE"* LOSSES
JANUARY, 1954, TO OCTOBER, 1955, INCLUSIVE
COMPANYWIDE

MONTH OF DEVELOPMENT	1955 MONTH OF LOSS January	February	March	April	May	June	July	August	September	October
1	.017	.018	.020	.013	.014	.060	.070	----NO BASE AVAILABLE------		
2	.046	.049	.095	.047	.047	.023	.010			
3	.056	.040	.045	.043	.044	.058	.058			
4	.043	.049	.043	.049	.053	.067	.043			
5	.037	.049	.012	.052	.077	.039				
6	.058	.052	.039	.053	.039					
7	.048	.057	.046	.049						
8	.039	.052	.060							
9	.047	.056								
10	.042									
CURRENT TOTAL	.415	.422	.360	.306	.275	.247	.182			

*Base losses are total reported losses for each month of loss after four months of development.

EXHIBIT VI

AMOUNT OF RESERVED CLAIMS BY MONTH OF LOSS AND MONTH OF DEVELOPMENT
JANUARY, 1954, TO OCTOBER, 1955, INCLUSIVE
COMPANYWIDE

MONTH OF DEVELOPMENT	1954 MONTH OF LOSS January	February	March	April	May	June	July	August	September	October	November	December
1	$1,219,985	1,076,390	1,282,225	1,453,503	1,453,494	1,430,438	1,454,098	1,504,540	1,331,760	1,581,820	1,591,920	2,077,689
2	2,095,646	2,044,595	1,950,345	2,051,237	2,591,992	2,116,279	2,348,671	2,182,555	2,336,295	2,598,319	2,577,767	3,006,378
3	2,232,006	2,219,170	2,078,196	2,160,044	2,776,688	2,207,242	2,485,459	2,421,281	2,471,621	3,000,609	2,860,358	3,279,486
4	2,181,910	2,208,075	1,962,936	2,118,979	2,691,481	2,137,529	2,532,370	2,460,625	2,467,376	2,986,065	2,846,453	3,216,157
5	2,034,060	2,038,261	1,870,047	2,052,196	2,502,785	1,953,789	2,445,660	2,423,112	2,329,216	2,874,337	2,686,258	2,990,387
6	1,898,731	1,967,735	1,761,550	1,875,500	2,424,590	1,825,223	2,392,160	2,315,686	2,134,355	2,648,397	2,578,323	2,889,967
7	1,768,600	1,901,465	1,620,130	1,737,840	2,287,430	1,665,601	2,251,245	2,161,300	1,920,161	2,433,883	2,423,405	2,807,857
8	1,737,615	1,757,365	1,463,445	1,635,490	2,090,510	1,597,396	2,203,860	2,036,830	1,770,054	2,312,650	2,282,280	2,733,477
9	1,518,285	1,551,820	1,393,590	1,562,520	1,983,435	1,504,336	2,035,620	1,817,498	1,687,791	2,161,507	2,163,145	2,519,425
10	1,372,870	1,480,600	1,327,720	1,486,335	1,849,415	1,444,643	1,990,650	1,635,830	1,517,895	2,098,635	2,045,960	2,189,195
11	1,336,310	1,504,860	1,282,850	1,369,495	1,683,115	1,286,859	1,844,035	1,489,321	1,385,450	1,951,645	1,850,200	2,031,675
12	1,182,510	1,327,295	1,175,515	1,218,485	1,482,280	1,176,550	1,754,730	1,379,706	1,258,130	1,710,775	1,574,330	
13	1,104,050	1,191,465	1,000,665	1,161,522	1,339,285	1,089,285	1,624,740	1,276,315	1,154,415	1,555,125		
14	1,058,550	1,129,705	989,065	1,059,245	1,238,495	987,270	1,483,990	1,145,805	1,083,040			
15	947,590	1,054,860	906,045	1,029,845	1,114,775	923,810	1,361,540	1,051,065				
16	912,470	951,690	858,565	947,880	1,050,035	813,265	1,278,580					
17	841,420	914,810	845,265	878,240	971,080	712,175						
18	762,980	831,565	833,705	828,000	873,170							
19	721,130	791,165	822,769	792,740								
20	695,610	682,670	789,110									
21	649,140	625,105										
22	641,390											

EXHIBIT VI

AMOUNT OF RESERVED CLAIMS BY MONTH OF LOSS AND MONTH OF DEVELOPMENT
JANUARY, 1954, TO OCTOBER, 1955, INCLUSIVE
COMPANYWIDE

MONTH OF DEVELOPMENT	1955 MONTH OF LOSS									
	January	February	March	April	May	June	July	August	September	October
1	$1,588,425	1,393,208	1,661,169	1,724,768	1,737,016	1,732,775	1,841,230	2,078,160	1,477,120	2,175,246
2	2,314,974	2,117,593	2,449,626	2,647,175	2,751,117	2,716,105	2,802,123	2,658,157	2,564,088	
3	2,549,368	2,375,731	2,719,133	3,065,479	3,088,289	2,899,608	2,862,791	2,980,246		
4	2,531,741	2,392,166	2,663,988	2,929,807	2,978,234	2,577,170	2,914,140			
5	2,503,075	2,300,326	2,584,243	2,699,035	2,613,035	2,558,180				
6	2,406,430	2,215,966	2,416,255	2,444,260	2,617,280					
7	2,274,015	2,004,146	2,190,480	2,386,125						
8	2,086,940	1,829,455	1,991,660							
9	1,905,635	1,717,000								
10	1,817,595									

EXHIBIT VI A

RATIOS OF RESERVED CLAIMS BY MONTH OF LOSS AND MONTH OF DEVELOPMENT TO "BASE"* LOSSES
JANUARY, 1954, TO OCTOBER, 1955, INCLUSIVE
COMPANYWIDE

MONTH OF DEVELOPMENT	1954 MONTH OF LOSS January	February	March	April	May	June	July	August	September	October	November	December
1	.461	.414	.495	.575	.456	.509	.476	.510	.416	.449	.480	.509
2	.792	.786	.752	.811	.813	.754	.769	.740	.729	.738	.778	.737
3	.844	.853	.802	.854	.871	.786	.814	.821	.771	.852	.863	.804
4	.825	.849	.757	.838	.844	.761	.830	.835	.770	.848	.859	.788
5	.769	.784	.721	.811	.785	.696	.801	.822	.727	.816	.811	.733
6	.718	.757	.680	.742	.761	.650	.784	.786	.666	.752	.778	.708
7	.669	.731	.625	.687	.718	.593	.738	.733	.599	.691	.731	.688
8	.657	.676	.565	.647	.656	.569	.722	.691	.552	.656	.689	.670
9	.574	.597	.538	.618	.622	.536	.667	.617	.527	.614	.653	.617
10	.519	.569	.512	.588	.580	.514	.652	.555	.474	.596	.617	.536
11	.505	.578	.495	.541	.528	.458	.604	.505	.432	.554	.558	.498
12	.447	.510	.453	.482	.465	.419	.575	.468	.393	.486	.475	
13	.417	.458	.386	.459	.420	.388	.532	.433	.360	.441		
14	.400	.434	.382	.419	.389	.352	.486	.389	.338			
15	.358	.406	.350	.407	.350	.329	.446	.357				
16	.345	.366	.331	.375	.329	.290	.419					
17	.318	.352	.326	.347	.305	.254						
18	.288	.320	.322	.327	.274							
19	.273	.304	.317	.313								
20	.263	.262	.304									
21	.245	.240										
22	.243											

*Base losses are total reported losses for each month of loss after four months of development.

RATIOS OF RESERVED CLAIMS BY MONTH OF LOSS AND MONTH OF DEVELOPMENT TO "BASE"* LOSSES
JANUARY, 1954, TO OCTOBER, 1955, INCLUSIVE
COMPANYWIDE

MONTH OF DEVELOPMENT	1955 MONTH OF LOSS									
	January	February	March	April	May	June	July	August	September	October
1	.525	.492	.497	.499	.491	.533	.517	--NO BASE AVAILABLE---		
2	.766	.747	.733	.767	.777	.835	.787			
3	.843	.838	.813	.888	.872	.891	.804			
4	.837	.844	.797	.848	.841	.792	.818			
5	.828	.812	.773	.782	.738	.786				
6	.796	.782	.723	.708	.739					
7	.752	.707	.655	.691						
8	.690	.646	.596							
9	.630	.606								
10	.601									

*Base losses are total reported losses for each month of loss after four months of development.

EXHIBIT VII

COMPARISON OF "BASE" LOSSES TO EXPECTED LOSSES BASED ON RESERVE DEVELOPMENT

MONTH	YEAR	"BASE" LOSSES	RESERVE AT ONE MONTH OF DEV.	EXPECTED LOSSES (.500 FACTOR)	% OF ERROR	RESERVE AT TWO MONTHS. OF DEV.	EXPECTED LOSSES (.760 FACTOR)	% OF ERROR	RESERVE AT THREE MONTHS OF DEV.	EXPECTED LOSSES (.840 FACTOR)	% OF ERROR
January -	1954	$2,644,751	1,219,985	2,439,970	-7.75	2,095,646	2,757,429	4.26	2,232,006	2,657,150	0.47
February		2,601,345	1,076,390	2,152,780	-17.24	2,044,595	2,690,257	3.42	2,219,170	2,641,869	1.56
March		2,592,144	1,282,225	2,564,450	-1.17	1,950,345	2,566,243	1.00	2,078,196	2,474,043	-4.56
April		2,529,150	1,453,503	2,907,006	14.94	2,051,237	2,698,996	6.72	2,160,044	2,571,481	1.67
May		3,187,757	1,453,494	2,906,988	-8.81	2,591,992	3,410,516	6.99	2,776,688	3,305,581	3.70
June		2,808,420	1,430,438	2,860,876	1.87	2,116,279	2,784,578	-0.85	2,207,242	2,627,669	-6.44
July		3,052,252	1,454,098	2,908,196	-4.72	2,348,671	3,090,357	1.25	2,485,459	2,958,880	-3.06
August		2,947,794	1,504,540	3,009,080	2.08	2,182,555	2,871,783	-2.58	2,421,281	2,882,477	-2.22
September		3,204,539	1,331,760	2,663,520	-16.88	2,336,295	3,074,072	-4.07	2,471,621	2,942,406	-8.18
October		3,522,904	1,581,820	3,163,640	-10.20	2,598,319	3,418,841	-2.95	3,000,609	3,572,154	1.40
November		3,313,348	1,591,920	3,183,840	-3.91	2,577,767	3,391,799	2.37	2,860,358	3,405,188	-2.77
December		4,080,729	2,077,689	4,155,378	1.83	3,006,378	3,955,761	-3.06	3,279,486	3,904,150	-4.33
January	1955	3,023,048	1,588,425	3,176,850	5.09	2,314,974	3,046,018	0.76	2,549,368	3,034,962	0.39
February		2,833,801	1,393,208	2,786,416	-1.67	2,117,593	2,786,307	-1.68	2,375,731	2,828,251	0.20
March		3,342,875	1,661,169	3,322,338	-0.61	2,449,626	3,223,192	-3.58	2,719,133	3,237,063	-3.17
April		3,453,080	1,724,768	3,449,536	-0.10	2,647,175	3,483,125	0.87	3,065,479	3,649,380	5.66
May		3,540,405	1,737,016	3,474,032	-1.87	2,751,117	3,619,891	2.25	3,088,289	3,676,535	3.85
June		3,253,690	1,732,775	3,465,550	6.51	2,716,105	3,573,822	9.84	2,899,608	3,451,914	6.09
July		3,562,085	1,841,230	3,682,460	3.38	2,802,123	3,687,004	3.51	2,862,791	3,408,085	-4.32

EXHIBIT VIII

INDICATED EARLY DEFICIENCIES OF REPORTED INCURRED LOSSES BY MONTH OF LOSS AND MONTH OF DEVELOPMENT BASED ON THE PROJECTION OF REPORTED RESERVES AND PAID LOSS ALLOWANCE FACTORS

MO. YR. OF LOSS	CALENDAR DATE OF EVALUATION											
1954	AS OF JAN. 31	AS OF FEB. 28	AS OF MARCH 31	AS OF APRIL 30	AS OF MAY 31	AS OF JUNE 30	AS OF JULY 31	AS OF AUGUST 31	AS OF SEPT. 30	AS OF OCT. 31	AS OF NOV. 30	AS OF DEC. 31
January	$1,073,587	441,189	106,286									
February		947,223	430,441	105,675								
March			1,128,358	410,599	98,962							
April				1,279,083	431,839	102,859						
May					1,279,075	545,683	142,223					
June						1,258,785	445,533	105,107				
July							1,279,606	494,457	118,355			
August								1,323,995	459,485	115,299		
September									1,171,949	491,851	117,696	
October										1,392,002	547,015	142,887
November											1,400,890	542,688
December												1,828,366
Indicated Deficiency Reserve			1,655,085	1,795,357	1,809,876	1,907,327	1,867,362	1,923,559	1,749,789	1,999,152	2,065,601	2,513,941
Nov., 1954	136,207											
Dec.	632,922	156,166										
Jan., 1955	1,397,814	487,363	121,399									
Feb.		1,226,023	445,809	113,130								
March			1,461,829	515,711	219,482							
il				1,517,796	557,300	145,975						
May					1,538,574	579,183	147,062					
June						1,524,842	571,811	138,076				
July							1,620,282	589,921	136,324			
August								1,828,781	559,612	141,917		
September									1,299,866	539,808		
October										1,914,216		
Indicated Def. Reserve	2,166,943	1,869,552	2,029,037	2,146,637	2,315,356	2,250,000	2,339,155	2,556,778	1,995,802	2,595,941		

EXHIBIT IX

ACTUAL EARLY DEFICIENCIES OF REPORTED INCURRED LOSSES BY MONTH OF LOSS AND MONTH OF DEVELOPMENT
COMBINED TO INDICATE NEEDED DEFICIENCY RESERVES

MO. YR. OF LOSS	CALENDAR DATE OF EVALUATION AS OF JAN. 31	AS OF FEB. 28	AS OF MARCH 31	AS OF APRIL 30	AS OF MAY 31	AS OF JUNE 30	AS OF JULY 31	AS OF AUGUST 31	AS OF SEPT. 30	AS OF OCT. 31	AS OF NOV. 30	AS OF DEC. 31
Jan., 1954	$1,381,050	376,698	98,102									
Feb		1,497,021	426,458	118,405								
March			1,258,485	394,161	124,765							
April				1,035,593	330,631	79,012						
May					1,703,099	400,913	72,961					
June						1,343,153	328,597	94,410				
July							1,549,698	508,164	187,682			
August								1,395,362	566,968	190,661		
September									1,824,132	540,507	288,015	
October										1,886,035	717,370	136,814
November											1,675,496	531,394
December												1,929,347
Needed Deficiency Reserve			1,783,045	1,548,159	2,158,495	1,823,078	1,951,256	1,997,936	2,578,782	2,617,203	2,680,881	2,597,565
Nov., 1954	112,031											
Dec.	731,523	231,000										
Jan., 1955	1,382,771	518,177	113,728									
Feb.		1,390,356	526,668	154,894								
March			1,615,671	509,387	88,193							
April				1,684,728	600,250	34,272						
May					1,753,254	572,228	78,086					
June						1,326,306	268,456	-104,875				
July							1,470,828	473,809	205,262			
Needed Def. Reserve	2,226,325	2,139,533	2,256,067	2,349,009	2,441,697	1,932,806	1,817,370					

EXHIBIT X

COMPARISON OF NEEDED DEFICIENCY RESERVES TO INDICATED DEFICIENCY RESERVES AND TO RESERVES FOR INCURRED BUT NOT REPORTED CLAIMS

MONTH, YEAR OF EVALUATION	NEEDED DEFICIENCY RESERVES	I.B.N.R. RESERVES	INDICATED DEFICIENCY RESERVES
1954 JANUARY	NOT AVAILABLE	$1,479,360	NOT AVAILABLE
Ratio			
February	NOT AVAILABLE	1,500,836	NOT AVAILABLE
Ratio			
March	$1,783,045	1,538,218	$1,655,085
Ratio	1.000	.863	.928
April	1,548,159	1,570,925	1,795,357
Ratio	1.000	1.015	1.160
May	2,158,495	1,578,652	1,809,876
Ratio	1.000	.731	.839
June	1,823,078	1,587,425	1,907,327
Ratio	1.000	.871	1.046
July	1,951,256	1,626,645	1,867,362
Ratio	1.000	.834	.957
August	1,997,936	1,642,112	1,923,559
Ratio	1.000	.822	.963
September	2,578,782	1,663,753	1,749,789
Ratio	1.000	.645	.679
October	2,617,203	1,681,533	1,999,152
Ratio	1.000	.643	.764
November	2,680,881	1,722,045	2,065,601
Ratio	1.000	.642	.770
December	2,597,565	1,748,042	2,513,941
Ratio	1.000	.673	.968
1955 JANUARY	2,226,325	1,785,553	2,166,943
Ratio	1.000	.802	.973
February	2,139,533	1,792,852	1,869,552
Ratio	1.000	.838	.874
March	2,256,067	1,802,279	2,029,037
Ratio	1.000	.799	.899
April	2,349,009	1,849,969	2,146,637
Ratio	1.000	.788	.914
May	2,441,697	1,883,748	2,315,356
Ratio	1.000	.771	.948
June	1,932,806	1,921,458	2,250,000
Ratio	1.000	1.006	1.164
July	1,817,370	1,946,763	2,339,155
Ratio	1.000	1.071	1.287

DISCUSSION OF PAPERS READ AT THE NOVEMBER 1955 MEETING

THE "WORKMEN'S COMPENSATION INJURY TABLE" AND "STANDARD WAGE DISTRIBUTION TABLE"—THEIR DEVELOPMENT AND USE IN WORKMEN'S COMPENSATION INSURANCE RATEMAKING

BARNEY FRATELLO

Volume XLII, Part II, Page 110

DISCUSSION BY L. W. SCAMMON

This paper describing the development and use of the Workmen's Compensation Injury and Standard Wage Distribution Tables is a most important one for workmen's compensation insurance. One has only to note the large number of amendments to workmen's compensation laws in the past few years and the relatively large percentage of premium collected which is dependent upon accurate calculation of the worth of these amendments to realize its importance. In addition, there is considerable evidence that an even greater reliance must be placed upon these tables in the years immediately ahead. Economic and social changes are demanding more and more liberalization of workmen's compensation laws. It follows that nothing less than the most accurate methods possible will be acceptable in calculating the advance worth of these amendments.

Recent voluminous and carefully screened and compiled workmen's compensation data have gone into these tables. The tables represent the ultimate in current representative data analyzed and presented after sound and intensive actuarial scrutiny.

THE "WORKMEN'S COMPENSATION INJURY TABLE"

For more than thirty years the American Accident Table effectively mirrored the pattern of accident expectancy in workmen's compensation insurance. Little can be said against it which will detract from its long record of usefulness. It stands as a tribute to its compilers that they were able to put together sufficient volumes of somewhat heterogeneous data into tables which stood up for over three decades. But the time inevitably came when the accuracy of the American Accident Table was challenged. To illustrate one such challenge, I recall that in 1949 law amendments in Massachusetts calculated to require approximately 30% increases in rate were tested under requirement of local authorities against what were considered adequate recent Massachusetts data and the Massachusetts data were used. Actually this was a mistake and subsequent events proved that the American Accident Table figures would have given more accurate results, but the challenge had been made and the not too recent data therein contained lost out.

With the decision made to produce the new Workmen's Compensation Injury Table, the problem became one of dealing with representative volumes of recent Workmen's Compensation data. Punch card methods made relatively easier a task which thirty years previously had been a much more formidable one. Also the practice of years of calculation of law amendment evaluations made easier the shaping of the pattern of tabulations, some to remain the same, others to provide new approaches to old problems.

The new Injury Table analyzes dependency and ages in 24,282 Fatal cases—about four times as many as the "Accident Table." The author leaves unexplained the drop in numbers from about 17,000 Fatal cases involving widows to only about 10,000 in the "Age Distributions of Widows—Fatal Disability Exhibit." Presumably this is because age data of widows were lacking on this large percentage of cases even though this is vital information in states providing pensions for widows.

It is interesting to note under the new Fatal Table that 13.9% of the Fatal cases left no dependents as compared with 22.8% under the American Accident Table.

Considerably more accurate deductions should be able to be made from the new Accident Distribution—Permanent Total—Disability because 2,900 cases vs. 454 cases in the American Accident Table are summarized. Apparently data were lacking in the early Twenties on other than dismemberment permanent total cases. In the new table the much more numerous head, back, paralytic and unclassified cases are brought in. One rather important and wise assumption was made, namely, that the dependency expectancy is the same for Permanent Total cases as for Fatal cases.

There is a substantial difference between the Permanent Partial distributions underlying the new and old tables. As the author points out, the American Accident Table shows 60% of the Major Permanent Partial and 75% of the Minor Permanent Partial cases are dismemberment or enucleation cases whereas the Injury Tables indicate that approximately 20% of the Major and about 15% of the Minor cases are dismemberment or enucleation cases. Seemingly this would point to the use of data more representative of current social conditions in the new analyses as well as the tremendous advances in safety practices now followed by industry and the advances made in the medical field.

An additional feature of the Workmen's Compensation Injury Table not available in the American Accident Table which should be enlarged upon is the loss of earning power in connection with Permanent Partial cases. In the Injury Table it is merly noted that for Other Permanent Partial cases, the average percentage loss of use is the same as the loss of earning power. Where this information is new for use in computing effects of law amendments, it would be desirable to have it explained more fully.

In connection with the table showing duration of Temporary Total Disability cases, some improvements and use of data reflecting current economic and social conditions have been made. However, with respect to cases lasting 4, 5, 6 and 7 days, the total number of cases was filled in proportionately from the very limited data of the few states with such short waiting periods. For cases lasting 1, 2 or 3 days, reliance on the American Accident Table is continued. Probably the compilers could do little else at this time, but this is certainly an instance where the table should be revised as more data become available.

THE "STANDARD WAGE DISTRIBUTION TABLE"

Here, too, years of dealing with the problem and National Council Staff know-how were important factors in the putting together of a new wage distribution. The basic material, a study of 185,384 cases involving forty states, the District of Columbia and Hawaii, was obtained comparably to the semi-annual calls for wage data expanded to show the pattern of number of cases by wage interval amounts. The paper exhaustively sets forth comparative state and sectional wage distributions effectively accentuating the likeness of data and moving through processes of smoothing and testing which makes you agree the results are good. Any questions as to the giving of equal weight to each state's data dissolve as the processes of smoothing the data unfold. Here we see careful, accurate, concise, actuarial presentation of current statistical fact. Here we see actuarial science at its best.

No attempt is made herein to discuss application of the new tables to calculations of examples of specific amendments as set forth in the third part of the paper. Amendments will differ from year to year and from state to state.

Unquestionably the "Law Amendment Factor" is one very essential element in Workmen's Compensation Insurance Rate Making. This paper makes a determined effort to present fundamental Workmen's Compensation data in a manner that no uncertainty will remain in the calculation of the effect of law amendments. A real attempt is made to remove the element of controversy from this portion of rate making. This, therefore, becomes the singular contribution of this paper and the study that preceded it from an Independent Bureau viewpoint—it is the fact that the distributions have been brought up to date and their accuracy and adequacy are not open to question.

Even though it can be stated that the new accident distributions are not too different from the old distributions and that the calculated effects are not too different, the Workmen's Compensation Injury Table and the Standard Wage Distribution Table reduce the allegation that obsolete data have been used to measure the effect of law amendments. With this emphasis on the use of current data, the question may be raised of how long the new distributions may be used without revision or testing. Certainly it follows that tests should be made after the lapse of not too many years and one after another, as needed, the tables adjusted and brought up to date rather than let as much time elapse again between changes.

At a time when the economy is undergoing a continuing growth, the bounds of which appear unlimited, and at a time when the social and political philosophies seem to be trying to keep in step, this study resulting in the "Workmen's Compensation Injury Table" and the "Standard Wage Distribution Table" is one which the Insurance Industry could not well afford to be without. This paper is likewise a valuable contribution to Insurance Rate Making.

DISCUSSION BY J. H. BOYAJIAN

Mr. Barney Fratello, the staff of the National Council on Compensation Insurance, its Actuarial Committee, and the Subcommittee of Departmental Technicians of the Workmen's Compensation Committee of the National Association of Insurance Commissioners are all to be commended for the part which each played in bringing to so successful a conclusion a project of this importance and magnitude.

For many years, prior to the decision to revise both the "American Accident Table" and the "Standard Wage Distribution Table," if memory serves me correctly, there was a general feeling that even if these tables were revised it could be expected that in a high proportion of instances there would be only a nominal effect upon the valuation of Workmen's Compensation benefit changes. With minor exceptions, this judgment has now been substantiated. It is not my intention, however, to imply that this exhaustive study was in vain. Even if no purpose were served other than to demonstrate to the insurance-buying public the vital concern of insurance carriers and rate-regulatory authorities over rate-making techniques, the man-hours devoted to this project will have been well spent.

Mr. Fratello points out that the new "Workmen's Compensation Injury Table" and "Standard Wage Distribution Table" will produce results similar to those developed by the earlier tables, with the exception of changes involving the "healing period." Assuming a given compensation act already provides benefits during temporary disability in addition to those provided for permanent disability, increases affecting the healing period alone will have a greater effect under the new distribution, while increases affecting permanent disability alone will have a smaller effect under the new distribution. These particular differences should not be unusual. However, in the event of an amendment newly providing benefits during the "healing period" in addition to those for permanent disability, the valuations under the two distributions will differ substantially. Whatever the differences may be, they will be only of academic interest. As Mr. Fratello indicates in his paper, the experience from which the revised "healing periods" were developed was considerably more extensive as well as more pertinent than that used in determining these durations under the superseded table.

The inclusion among the permanent partial injuries of those cases expressed as percentages of permanent total disability is, in my opinion, a distinct improvement over the older table which made no such provision. Amendments liberalizing permanent total benefits will no longer be confined only to these injuries, but will have a proper effect also upon major and minor permanent partial benefits. The listing of "healing period" durations by type of member, while not so important as the inclusion for the first time of permanent partial cases related to permanent total disability, is a further step in the right direction.

Due to the absence of data concerning the number of temporary disability cases lasting three days or less as well as the limited experience regarding the number of cases lasting exactly 4, 5, 6 or 7 days, judgment, with which there can be no serious quarrel, was exercised in the completion of the tables identified as Exhibit E-VI and F-V Part I. While there is both sufficient evidence as well as an explanation relative to the nature of column (4) its heading may be confusing to others as it was to me. The days disability shown in column (4), of course, reflect waiting periods which are one day less than the number of days shown in column (1).

Exhibit VI Part II contains evidence, in my opinion, to justify the decision to base law valuations for individual states upon the countrywide distribution of wages by size. The examples shown, based upon distributions of both "low-wage" and "high-wage" states versus the revised countrywide wage distribution for selected amendments affecting "low-wage" and "high-wage" states differently, are sufficiently close in their effects to warrant the disregard of a multitude of distributions.

Mr. Fratello's valuation, in Part III, of a hypothetical law amendment is comprehensive to the nth degree, which is all to the good particularly from the standpoint of students who may be called upon to study this paper. There is, however, a very minor point which might be raised to the effect that the "Workmen's Compensation Injury Table" as presented in this paper will rarely coincide precisely, from the standpoint of dependencies and types of scheduled injuries compensated, with those of a given compensation act. This being the case, Mr. Fratello will agree I am sure that it becomes necessary to adapt the table to suit the needs of each state. The benefit provisions of the California Workmen's Compensation Law as it affects permanent partial disabilities is an excellent example of just such a situation.

In the event of permanent injuries, the California law stipulates that four weeks of compensation shall be paid, at 65% of allowable average weekly earnings, for each 1% of disability. In addition, where the percentage of disability equals or exceeds 70%, deferred compensation shall be paid for life at a reduced percentage of the allowable wage. This percentage is taken as the difference between the percentage of disability and 60%. The percentages of disability referred to are in terms of permanent total disability. For the following principal reasons, the use of the "Workmen's Compensation Injury Table" is not adaptable to the valuation of amendments affecting permanent partial injuries in California:

1. The breakdown of permanent injuries by type does not coincide with the division in the revised table. As one example, the loss of both legs at or above the knees is considered to represent 95% of permanent total disability and in California is treated as a high cost major permanent partial case whereas in other jurisdictions it would be considered permanent total.
2. The percentages of permanent total disability for various injuries are subject to variation based upon age and/or occupation.

As a matter of interest, the distributions of permanent partial injuries currently being used in California for valuations of this nature are shown below:

Minor Permanent Partial

Class Interval of Ratings, %	*% of Cases*	*Average Rating, %*
.25– 4.75	36.70	2.77
5– 9.75	28.52	7.02
10–14.75	14.14	12.30
15–19.75	11.36	17.13
20–24.75	9.28	22.23
.25–24.75	100.00	8.77

Major Permanent Partial

Class Interval of Ratings, %	*% of Cases*	*Average Rating, %*
25–29.75	23.18	27.33
30–34.75	20.06	32.14
35–39.75	13.46	37.07
40–44.75	8.39	41.95
45–49.75	6.18	47.02
50–54.75	6.12	52.03
55–59.75	5.39	56.95
60–64.75	4.49	61.89
65–69.75	3.27	66.87
70–74.75	2.06	71.95
75–79.75	1.64	76.52
80–84.75	2.59	82.16
85–89.75	1.43	87.15
90–94.75	1.37	91.92
95–99.75	0.37	95.29
25–99.75	100.00	43.14

This exception to the use of the "Workmen's Compensation Injury Table" should not be construed as an adverse criticism, since for most compensation acts the table in its entirety is admirably suited for its intended purpose. My only point is to emphasize that care must be exercised in the application of this table.

As stated previously, all those connected with this project and particularly Mr. Fratello for his fine presentation deserve high praise.

NOTES ON NONCANCELLABLE HEALTH AND ACCIDENT RATEMAKING

ALFRED V. FAIRBANKS

Volume XLII, Part II, Page 89

DISCUSSION BY W. V. B. HART

It goes without saying that any material on noncancellable health and accident insurance emanating from Mr. Fairbanks' Company is well worth reading. His Company and a few others have been shining examples for many years of the fact that the word "noncancellable" does not necessarily mean financial disaster. It is now hard to realize that the word "noncancellable" was still spoken in hushed tones when the two latest papers on the subject were presented in our Proceedings—those by Mr. John H. Miller, Volume XXI, and Mr. Jarvis Farley, Volume XXVII. Accordingly, now that many life insurance companies have entered the health and accident field, many of them on a noncancellable basis, his paper is particularly timely.

As a matter of fact, its interest extends beyond the field of noncancellable insurance. Our Company recently brought out a commercial contract providing for loss-of-time insurance, with other benefits to be added by rider, and used essentially the rate-making technique illustrated in this paper. It is possible that in the future there will be quite a swing away from the traditional rate pattern in cancellable insurance of a single rate applicable to all ages of issue, or at least to two or three broad age groups, toward a more scientific pattern, in which case familiarity with the methods shown by Mr. Fairbanks becomes an absolute necessity.

It will be very interesting in due time to discover whether a widely spread sale of noncancellable insurance to a much larger cross-section of our population than has hitherto been covered will cause any appreciable change in morbidity levels. I might try to paraphrase some remarks of a colleague in the Society of Actuaries (spoken, however, in quite a different context): "You and some congenial friends have a nice little colony of summer cottages on the shorefront and everything is just quiet and lovely; then the general public begins to admire it and rushes in to buy all the surrounding property, and they spoil it all."

Confining myself for the moment to the nonmathematical aspects of this paper, if I were to take issue with Mr. Fairbanks on any point, it would be to question an implied undercurrent in the paper that principles of sound underwriting, good rate-making, etc., are peculiar to noncancellable insurance. I would say, rather, that the institution of health and accident insurance is indivisible and that all the basic underwriting principles which he mentions likewise apply to cancellable insurance. The differences may well be those of degree rather than kind.

The thought has been expressed that we are now going into an era in which there will be not a hard and fast classification into non-cancellable and cancellable but, as another fellow-actuary has put it, into a "spectrum" of coverage comprising among others such patterns as:

(1) insurance nominally cancellable, but with the privilege of such cancellation used very sparingly;
(2) with the right to cancel not applicable to changes solely in physical condition of the insured;
(3) with the right to increase premiums reserved to the company but applicable only to an entire class of policyholders;
(4) various combinations of the above.

On the matter of mathematical technique, Mr. Fairbanks mentioned a pension fund type of formula and described in detail the sickness type. To round out the discussion it might be well to remind ourselves that the two types can be shown to be equivalent, as demonstrated by Mr. Miller on Page 341 of Volume XXVII of our Proceedings, showing that

$$H_z^{o/all} = {}^wC_z^r \text{ and } K_z^{o/all} = {}^wM_z^r.$$

Obvious changes can be made for the various waiting periods.

The matter of whether lapse rates should have been taken into consideration in premium calculation is a rather fascinating problem and perhaps an insoluble one. If we are to assume that we are to have a free choice as to whether to introduce this element into the formula and that the same morbidity is assumed under either method, then the statement by Mr. Fairbanks is correct that the introduction of the lapse element gives the proper weight to the interaction of high initial expense and normal increase of morbidity with attained age. I am inclined to think that in most cases the "asset share" assigned hypothetically to a policy is usually positive after the first few years and therefore the omission of the use of lapse rates provides a hidden safety margin in the resulting level premium.

On the basis of classical theory, if we calculate rates using an intelligent projection into the future of discontinuance rates and morbidity rates experienced in the past, we probably obtain a fairly realistic premium. If the discontinuance rate of the future is higher than in the past, any additional gain from reserves released on lapses is likely to be used up by higher morbidity. If the discontinuance rate of the future is less than in the past, the gain from reserves released by terminations tends to disappear, but the morbidity should improve correspondingly. This is on the rather naive assumption that all bad risks normally persist and the good risks are the first to drop out. It is doubtful if human behavior is that simple. Even though, however, lapse rates are subject to human volition and may therefore be rather unpredictable, there should be some automatic offset in the claim rate. Since, however, the exact relationship between discontinuance rates and favorable and adverse selection is unknown, we probably have no choice except to assume that, in general, discontinuance rates and morbidity rates of the future will tend to reproduce the past.

A rather good practical and conservative rule has been formulated by some actuaries in connection with life insurance rates that if the use of discontinuance rates produces a higher premium, they should be taken into account but, if it produces a lower premium, they should be ignored. The problem of life-insurance rate-making is, however, not entirely comparable.

The hypothetical example of expense rates outlined by Mr. Fairbanks is an excellent example of the type of rate study necessary as a preliminary step toward any level premium calculation. Although his factors are hypothetical, when they are compared with some adopted in our own Company about two years ago, his figures appear to be of a realistic order of magnitude. He seems to have assessed relatively more of the expense as a percentage, while we have assessed more "per policy." Likewise, we seem to have a greater tendency than he toward packing expense into the first policy year. We have introduced also the concept of claim expense as distinct from issue or handling expense.

Such differences between companies in the attack on an expense problem are not uncommon, since cost accounting in insurance cannot, in my opinion, be an exact science. The important thing is to get all the expense in somewhere. The fact remains that, after allowing for the fact that our sales expense is measured from a branch office point of view rather than from that of a general agency, the overall loading at which we arrive for all expenses combined is little different from his. I might add that our average size of policy assumption was quite close to his, but the actual results since the policy was put on the market have revealed an average size about double that assumed.

DISCUSSION BY S. W. GINGERY

Mr. Fairbanks' excellent paper has helped to fill a definite need for more information on the subject of ratemaking for Health and Accident coverage.

The lack of suitable morbidity data referred to by Mr. Fairbanks is one of the most difficult problems the actuary is confronted with. The Committee on Experience Under Individual Accident and Sickness Insurance of the Society of Actuaries has completed plans for collecting on an annual basis, inter-company experience under policies providing benefits for total disability from sickness and under policies providing benefits for total disability from accident. Data will be compiled initially in 1956 for claims incurred in 1955. Although data from the various companies will not be entirely homogeneous, nevertheless, experience tables that are developed should prove to be extremely helpful.

The gross premium formulas used by Mr. Fairbanks are similar to those used by Mr. Cammack in his paper, "Premiums for Non-Participating Life Insurances" (T.A.S.A., XX, 379). Mr. Cammack, however, did not introduce lapse rates in his calculations. The method used by my company to compute gross premiums for both loss of time policies and hospital expense policies is based upon the method developed by Mr. Hoskins in his paper, "A New Method of Computing Non-Participating Premiums" (T.A.S.A., XXX, 140).

Mr. Hoskins' method makes use of the fact that an accumulation is customarily made as part of a premium investigation. The fund accumulation, which we call an Asset Share, is obtained at the end of each policy year and represents, for a particular age and plan, the persisting policy's share of the assets, i.e., income less disbursements. The accumulation takes into account termination rates, an interest rate and all elements of expense.

It is very probable that Mr. Fairbanks obtains a fund accumulation at the end of each policy year, at least for some plans and for some issue ages. This is a technique which the actuary will find useful in obtaining a proper rate structure.

In order to provide an illustration of this technique, I have taken Mr. Fairbanks' assumptions as to expenses, average size of policy, etc., and introduced assumptions as to persistency rates. For morbidity I used net annual claim costs from the Conference Modification of the Class 3 Table. By using the formula in the paper, I obtained an annual gross premium per $1 of weekly benefit for a policy issued at age 45, coverage to age 65, with an indemnity benefit of 1 year and 1 week elimination period. In order to provide for a margin for contingencies and dividends (or for profit in the case of stock companies), I arbitrarily increased the gross premium by 10%. Of course, the 10% increase is diminished by per premium expenses.

I then used an accumulation formula to obtain the fund accumulation at the end of each policy year. I found that the fund does not become positive until the 8th policy year. A company is, of course, required to set up reserves so that it is not until about the 12th policy year, if all assumptions are realized, that a margin first emerges. Of course, if I had increased the calculated gross premium by more or less than 10%, then the margin would have emerged sooner or later than 12 years. If age 20 instead of age 45 had been used, it would have taken a much longer time for the fund to be positive. This estimated number of years required for a given block of business to become profitable would be of particular interest to a company entering the business for the first time.

A company issuing accident and health coverage on a participating basis, such as my company does, could determine a gross premium such that the fund accumulation at the end of the nth policy year is exactly equal to the nth year terminal reserves. Based upon actual experience as to expenses, morbidity and persistency, dividends can be paid when the fund reaches a positive position.

Mr. Fairbanks indicates that loss ratios can be used to check on the actual experience. The traditional loss ratio fails to give any accurate indication of how the actual rates of morbidity being experienced compares with the morbidity assumptions on which premiums are based. In order to test the adequacy of asset share morbidity assumptions, we obtain ratios of actual to expected claims for each calendar quarter. Expected claims are obtained by applying the net annual claim costs assumed in our asset share calculations to exposures determined from our inforce statistical punch cards.

With regard to a reserve for maternity benefits, I might add that a reserve is required only if the coverage under the policy extends 9 months following date of lapse providing pregnancy had its inception while the policy was in force. Where a policy only provides maternity benefits for hospital confinement while the policy is in force, no reserve for deferred maternity benefits is required since, in that situation, the claim is incurred as of the date of hospitalization.

OBSERVATIONS ON STATE TAXATION OF CASUALTY AND FIRE INSURANCE COMPANIES

EDWARD C. ANDREWS

Volume XLII, Part II, Page 97

DISCUSSION BY E. C. MAYCRINK

The first observation which occurs to me on the subject of Taxes is what is said of the weather—everyone talks about it but nobody does anything about it. Mr. Andrews has done something about it. This paper deserves to be read and reread even though you do not happen to be the one who must continuously face the preparation of the innumerable and heterogeneous tax reports. It is difficult to grasp the many tax requirements outlined in the paper (probably because one is allergic to the word "taxes") and it must have been difficult to encompass the various laws in one paper. These laws cover forty-eight various state and lesser jurisdictions. A reference to the latest index of the *Proceedings* would seem to indicate that this is the first paper on taxation. It should be kept on the agenda.

Usually one thinks immediately of how much tax we have to pay, and that of course is important. The author, however, mentions first the service performed by every insurance carrier for each state in which it is admitted to do business, viz., collection of taxes from the policyholders and the accounting for and return of these taxes to the various state and local taxing authorities. This points up and directs our thoughts to one of the many things which is usually taken for granted. The companies show in their annual statements the amounts paid to states as well as to the federal government and the municipal and other governing bodies. Tax factors are included in the expense portion of the rates. Mr. Andrews has shown in Exhibit A some of the many types of taxes as outlined in the instructions for uniform classification of expenses. But little thought has been given to the time-consuming work and the expense to companies, and eventually, of course, the expense to the policyholders for tax collection.

It is interesting to note when we look back over the history of supervision of insurance in this country, and particularly in the State of New York with which I am the most familiar, that taxation came first. In 1824* the State of New York imposed a tax of 10% on the premiums received in that state by fire insurance companies incorporated in other states. Other states followed suit. Naturally, periodic reports were devised to guard this substantial revenue. Returns have to be audited, and along the lines of the old nursery rhyme, "This is the House that Jack Built," the beginnings of supervision of insurance grew to the imposing edifice it is today. All of this could be considered logical and reasonable, but the question arises in the author's mind, and we must certainly agree with him, that, in general,

* "Insurance," Mowbray & Blanchard.

excise taxes are imposed on the so-called luxury items with essential items excluded. Can insurance, particularly Workmen's Compensation insurance, be considered a luxury item? Rather is it not an imposition on the thrift of the policyholder who must needs protect himself against disaster and in fact is compelled to buy protection in some cases, such as workmen's compensation.

There is no doubt that insurance supervision has benefited the insurance companies, the policyholders, and the public at large. Mr. Andrews cites tax figures for the year 1953. An article by Elmer Miller in the *Journal of Commerce,* May 4, 1956, gives the figures on taxes for a later date. Federal taxes for carriers writing all kinds of business amount to approximately $800 million a year, not including social security. The state taxes in 1955 amounted to approximately $340 million as compared with the $328 million in the 1954 survey. Of this amount, $16.4 million was for state supervision as compared with the $13.5 million shown in the earlier survey. Even though we accept the fact, and have become conditioned to it, that taxes on insurance represent a burden on the thrifty, and that they produce large revenues to be used for purposes other than state supervision of insurance, is it necessary that tax reporting be made difficult and an added burden and expense to the insurance companies?

As we read of the multifarious laws imposing different rates on different bases, net premiums, gross premiums, return premiums, and so forth, the complications when reinsurance enters the picture and the retaliatory taxes, we face confusion worse confounded.

Certainly there should be a way to try for uniformity, if not in the rate of tax each state levies, at least something could be done towards uniformity in filing forms and less onerous requirements of unnecessary detail.

Although I stated above that nobody does anything about taxes, Mr. Andrews, in Exhibit B, has given us a copy of a letter from the Association of Casualty and Surety Executives praying for relief because of help shortage in war time. It is hoped that Mr. Andrews' paper can be followed up, and through the efforts of the National Association of Insurance Commissioners at least the burden of the mechanics of collection can be made lighter. It should not take a war to ask for relief from unnecessarily complicated requirements from so many different jurisdictions. The companies, through their respective organizations, should renew the plea for simplification of this Sisyphean task.

DISCUSSION BY J. A. RESONY

Mr. Andrews has done a distinct service to the Society in presenting this paper on a subject which has heretofor had very little consideration in our Proceedings. The paper should be of considerable value especially to students of the Society preparing for the examinations.

Mr. Andrews starts his paper by making the point that the state premium tax has become a major source of income for the general funds of most states and that this tax is in fact an indirect tax on most of the residents of the state. This is conceded. However, it must be realized from the viewpoint of the taxing authorities the premium tax approaches the ideal tax situation. Here we have a tax with the broadest of bases, susceptible to accurate verification, and with a very small cost of collection. It is fortunate indeed for the companies or the policyholders that the retaliatory tax statutes of other states make it impracticable to do much about increasing the rate of tax.

I can not help but comment on two references made to the tax situation in Connecticut. First, I am sure Mr. Andrews does not mean to imply that Connecticut companies are under any special disadvantage in paying the expenses of their examinations by the Connecticut Department something incidentally which they have done only since July 1, 1953. Domestic companies pay the cost of examination in about three quarters of the states. Secondly, with regard to the Connecticut investment income tax there has been a program to reduce both the rate of tax and the percentage of the investment income to which it applies gradually over a period of years while keeping the dollar amount of tax yield about constant. This program was halted, temporarily at least, when the 1955 General Assembly refused to enact the usual biennial reduction.

The operation of the retaliatory features of the tax laws is complicated and produces many strange results. For instance because of the extra revenue needs of the State of Connecticut produced by the floods of 1955 it was proposed that all state taxes be increased. A bill was drawn to increase the premium tax on the Connecticut business of all insurance companies. However when the effect of other states retaliatory laws was realized the bill was amended to apply to only the Connecticut business of Connecticut companies.

The question of whether a retaliatory tax is to be applied "item by item" or on an aggregate basis is as the author states answered differently in different states. Vance's Handbook on the Law of Insurance (3rd edition, revised B. M. Anderson) states "The retaliatory features are usually but not always construed on an 'aggregate' and not on an 'item by item' basis." On the other hand the Attorney General of Connecticut ruled in 1950 that the Connecticut statute (quite similar to the Minnesota law quoted) is to be interpreted on an "item by item" basis.

An interesting question arose recently in connection with a large Ohio Company. This company omitted from its tax base workmen's compensation insurance premiums written in Connecticut on the ingenious grounds that since Ohio has a monopolistic state fund no Connecticut Company (with minor exceptions) could have any workmen's compensation premium in Ohio. However since the effect of the Connecticut retaliatory law is to impose the higher of the Connecticut rate of tax and that of the home state the Department held that the Connecticut rate of tax applied rather than no tax at all. As a result over five thousand dollars additional taxes were collected.

The Connecticut retaliatory statute contains an interesting provision directed at the New York City gross receipts tax reading as follows:

> "When by the laws of any other state or foreign country any premium or income or other taxes, or any fees, fines, penalties, licenses, deposit requirements or other obligations, prohibitions or restrictions are imposed upon Connecticut insurance companies doing business in such other state or foreign country, or upon the agents therein, which are in excess of such taxes, fees, fines, penalties, licenses, deposit requirements or other obligations, prohibitions or restrictions directly imposed upon insurance companies of such other state or foreign country doing business in Connecticut, so long as such laws continue in force the same obligations, prohibitions and restrictions of whatever kind shall be imposed upon insurance companies of such other state or foreign country doing business in Connecticut. Any tax obligation imposed by any city, county or other political subdivision of a state or foreign country on Connecticut insurance companies shall be deemed to be imposed by such state or foreign country within the meaning of this section, and the insurance commissioner for the purpose of this section may compute the burden of any such tax obligations on an aggregate statewide or foreign-country wide basis as an addition to the rate of tax payable by similar Connecticut insurance companies in such state or foreign country. The provisions of this section shall not apply to ad valorem taxes on real or personal property or to personal income taxes."

Accordingly the Connecticut Department each year requires each domestic company to report the premium taxes paid to New York City and New York State. These returns are compiled and the extra burden imposed by the City tax is figured as a percentage of the State tax (separately for life and fire and casualty premiums). Each New York company is then billed for this percentage of the amount of premuim tax already paid to Connecticut.

Other situations arise under the retaliatory statutes quite aside from the variety in rates. Taxes are due on different dates in the several states. In Connecticut the due date is April 1 for non-resident companies although as a matter of convenience most report and pay with the filing of the annual statement. In California the due date is August 1 and California companies have tried to convince the Connecticut Department that they should be allowed discount for paying March 1 or April 1 but the argument has been refused.

Casualty companies report premiums quarterly to New York and pay quarterly taxes. A bygone Connecticut Attorney General ruled that Connecticut must by retaliation similarly require quarterly returns from casualty companies of New York. From the standpoint of clerical costs in the Connecticut Department this is a fine example of cutting off the nose to spite the face.

I am in complete agreement with the author's opinion that distinctions between fire and casualty companies for tax purposes (or, indeed, for most other purposes) are anachronistic. Connecticut makes no such distinction. Under present conditions preparation of tax returns for many states—or even the auditing of returns from companies of many states is not a simple task. Greater uniformity in laws would help and should be promoted by all appropriate means. Differential tax rates, discriminatory though they may be, have not in actual fact impeded company progress. Company prestige and aggressive selling seem to have been more important.

THE MULTIPLE-LINE PRINCIPLE

G. F. MICHELBACHER

Volume XLII, Part II, Page 75

DISCUSSION BY L. H. LONGLEY-COOK

As the actuary of a company whose President, Mr. John A. Diemand, has been a leader in the movement to introduce the Multiple-Line principle into our insurance practices, it gives me very great pleasure to be asked to submit a written discussion of Mr. Michelbacher's excellent paper. Those who have played an active part in the developments which have occurred in these last 15 years, so momentous in the history of insurance, will enjoy reading the author's clear development of the story and those who have been on the side lines and have not been closely concerned with each new step, will find this paper will give them a much closer insight into the problems with which we are presented today.

There are no doubt some who trace to the introduction of the multiple-line principle, many of the problems and difficulties with which the insurance industry is faced today. It is true that these changes have produced many problems and headaches, but when we consider the vast improvement in service to the public which has resulted from multiple-line underwriting, we can but accept these problems as the inevitable result of progress.

The author has set out so well the history of what has happened in the last 15 years that there is little that can be added by way of discussion to the main body of the paper. It is perhaps wise, however, to add the comment on the section headed Inland Marine that some authorities have grave doubts of the legality of the Commissioners, in their attempt to provide a practical solution to the problem of the definition of Inland Marine business, allowing a private body, the Committee on Interpretation of the Nationwide Marine Definition, to usurp their individual duty to administer the law of their respective states.

There has been one new development since the paper was written which should be recorded. The Committee on Blanks of the N.A.I.C. recommended the inclusion of two new lines in the annual statement and two new columns in the Expense exhibit:

Homeowners Multiple Peril
Commercial Multiple Peril

to provide for the "reporting under various types of combined coverage package policies not otherwise classified."

It is to the solution of current problems I particularly want to refer and it is convenient to take in turn, the points on which the author touches in the penultimate section—Problems Created by Multiple Line Legislation.

I am a firm believer in the advantages of the use of the indivisible premium for those classes where the total premium is small. I have been closely associated with the Homeowners policy since its inception, and there is no question that the phenomenal success of this policy lies in the use of an indivisible premium. The indivisible premium greatly reduces the work of the agent, both in his dealings with his client and in the preparation of the policy. Further, an indivisible premium leads to real savings in the statistical work of the insurance company and develops credible statistics considerably more rapidly. Today, in the Homeowners Policy, we have a very clear picture of the policy experience and can readily interpret the cause for unfavorable experience should it develop in any territory. The technique of an indivisible premium combined with the analysis of losses by cause has proved one of the most valuable ever developed. On the other hand, I am doubtful if any insurance company has detailed knowledge how experience is developing under the corresponding divisible premium policy, the Comprehensive Dwelling Policy, and few companies can say even if their total experience under these policies is profitable or not. Certainly, the rate makers are completely in the dark as to the adequacy of the rates they promulgate.

The indivisible premium is not, of course, a new concept. It is the traditional approach to the multiple peril problem before fire and casualty perils could be combined in a single contract. The Extended Coverage Endorsement comes immediately to mind a multiple peril coverage with an indivisible premium; nearly all Marine business is multiple peril in nature, and the Comprehensive Personal Liability Policy replaced earlier—special risk coverages.

With commercial multiple-line policies, both the divisible and the indivisible premium have advantages, the one providing more flexibility, the other greater simplicity.

The effect of multiple-line underwriting on insurance companies is only now being really felt. Most of the larger insurers have at least one fire and marine company and at least one casualty company. The companies have often very different agency organizations, and the possibility of multiple-line underwriting has led to many company reorganizations, and the closer integration of the companies in a fleet, often by pooling arrangements.

The new policy forms have shown the need for special departments handling multiple-line policies and this in turn has led to new accounting problems. We are used to the subdivision of the expenses of a fire or casualty department over a number of lines in the expense exhibit, but we now have the more complex problem that business in an individual line may be developed by more than one underwriting department. As an actuary with a British background, I look wistfully at the returns required of a British insurance company which, if we exclude Life Insurance, involve only 5 lines of business Fire, Automobile, Casualty (Accident), Employers Liability and Marine (including Aviation and Inland Marine).

The Insurance Departments have been presented with a most difficult problem in trying to administer rate regulatory laws with the flood on new policy forms and rating plans. Developments which have been stifled for years by the old restrictive laws are now coming so fast that they are difficult to digest. Insurance departments have tried their best to deal with their difficult problems, but it seems to me that the present system of having to obtain approval for any new rating plans in 48 states is most uneconomic and unreasonable. To restrict new developments as some people in the industry advocate would not be in the best interest of the public and I would prefer to see the general adoption of a rating law similar to that at present in use in California where Departmental approval of each new rating plan is unnecessary. I find it difficult to understand why there should be such a great need to regulate fire insurance premiums while Ocean Marine and Life Insurance premiums need no regulation.

DISCUSSION OF PAPERS READ AT THE MAY 1956 MEETING

A REVIEW AND COMPARISON OF WORKMEN'S COMPENSATION EXPERIENCE IN NEW YORK STATE AND WISCONSIN

FRANK HARWAYNE

Volume XLIII, Part I, Page 8

DISCUSSION BY D. R. UHTHOFF

Mr. Harwayne has made a further contribution to the puzzling question of analyzing state differences in compensation costs and rates. Using his paper in conjunction with Mr. Johnson's 1953 paper and Mr. Goddard's discussion, we now have substantial printed word to give us confidence as we employ a relatively modern method of making these comparisons. Up to a few years ago, the National Council had been issuing a table of state benefit level indexes which most people looked upon as dependable despite the Council's repeated warnings that many factors other than benefit provisions needed consideration. Some broad assumptions had to be made in calculating that table, such as one common average wage for all states, no administrative variations, assumption of identical medical cost levels, and so forth, so that if a benefit index comparison between two or more states was at all close to a comparison of actual average rates, luck had much to do with it. In the present instance, a calculated benefit level might make Wisconsin look about 20 per cent more expensive than New York, but Mr. Harwayne's actual rate comparisons, using identical payroll distributions by class, either New York or Wisconsin's, makes Wisconsin look about 45 per cent cheaper. Mr. Harwayne shows us a way of handling actual experience in searching for the answer to what amounts to one basic question: Are the lower Wisconsin rates due to lower frequencies per payroll units, or are they due to lower cost conditions, or to what extent do each of these factors operate? From his experience analysis he concludes that frequencies are only silghtly less and that lower cost conditions in Wisconsin play the most important part.

Perhaps I still have a soft spot for benefit calculations, having been friendly with them for some years, and they are still very useful and probably quite accurate in evaluating current benefit changes within each state. I suggest they may also be useful in refining actual experience figures if we keep a weather eye open as to what they can occasionally do for us. Here we have a case of the Wisconsin frequency figures having been inflated by a very small waiting period—three days' retroactive at ten days compared to New York's seven days' retroactive at thirty-five days—adding little to cost but considerable in numbers.

We have in our Proceedings the new Workmen's Injury Table as presented by Mr. Fratello and we need refer to only a small part of that, the distribution of temporary total cases by duration, to see what the Wisconsin frequency might have been if the New York waiting period had been in effect. The adjustment should be reasonably accurate inasmuch as Wisconsin is one of the few states having such a small waiting period and Wisconsin cases contributed materially to the temporary total distribution table. The table indicates that Wisconsin had 36 per cent more temporary total cases than it would have had if the New York waiting period applied, and following that adjustment through the policy year 1951 and 1952 experience, the result is an indicated indemnity frequency about 30 per cent less than New York's, instead of approximately 10 per cent less as indicated by the raw experience. Since Wisconsin rates are shown to average about 45 per cent less than New York's, and rates are products of frequencies and average costs, it follows that Wisconsin costs are 20 per cent less than in New York.

Thus, if one were to make a thorough investigation of the physical factors responsible for the substantial rate level difference between the two states, he would direct his attention to finding the reasons for New York's greater frequency of claims as being more important than cost factors, and we might note that since the latter may be so closely allied to state economic conditions, correction or change might be found relatively difficult.

Through analysis of selected pure premiums and rates, Mr. Harwayne finds that pure premiums from which class rates were calculated represent 70 per cent of rates in New York but only 55 per cent of rates in Wisconsin, and then concludes that although insurance costs are higher in New York, the proportion of manual dollars incurred in benefits is greater in New York than in Wisconsin, presumably to the degree of 70 per cent versus 55 per cent. That conclusion may be somewhat abrupt without further analysis. Actually, New York expense requirements for manual rates are greater in New York. The 1955 rate revisions anticipated 57.4 per cent for losses in New York and 59.6 per cent in Wisconsin, the main source of difference being the New York Workmen's Compensation Board assessments.

The New York pure premiums were calculated on the 1948 to 1952 experience level, quite a bit different from the final rate level based on the composite year July 1952 through June 1953, and the calendar year 1954. In the final step from proposed pure premiums to rates, correction factors of .8276 on indemnity and .8450 on medical were applied, in addition to a factor on payroll classes of .987, these averaging about .82 over-all. Applying .82 to Mr. Harwayne's 70 per cent pure premium ratio gives us 57.4 per cent as loss expectation, happily coinciding with the permissible loss ratio.

The 55 per cent Wisconsin ratio of pure premiums to rates is below the 59.6 per cent expected loss ratio because of inclusion in rates of the general and specific hearing elements, a later law amendment not included in the original pure premiums, a rate level adjustment factor, and a final balancing factor to obtain the required rate level. Though actual adjustment of pure premiums to the level contemplated by final manual rates would be somewhat complicated, there is little doubt we would wind up with a ratio close to the 59.6 per cent portion expected for losses. Thus it would seem that the permissible loss ratio underlying each state's rates would have to be taken as the measure of benefits incurred in manual premiums: 57.4 per cent in New York and 59.6 per cent in Wisconsin.

A HISTORY OF THE UNIFORM AUTOMOBILE ASSIGNED RISK PLAN

ELDEN W. DAY

Volume XLIII, Part I, Page 20

DISCUSSION BY H. E. CURRY

As the title indicates, this paper outlines the historical situations that stimulated thoughts of an automobile assigned risk plan.

Mr. Day is well qualified to write on this subject because he has been an active participant in all of the discussions and planning that have been necessary to bring about the degree of essential uniformity that exists today. Having been present at several of these sessions, I can attest to the fact that the author has approached the many problems realistically, and been logical and persuasive in his thinking.

Since this paper is a history of the Uniform Automobile Assigned Risk Plan the author has endeavored to chart the events, in chronological sequence, that led up to the consideration and development of the Uniform Plan. In reading the paper for chronological sequence I did not perceive any statements, at least of any consequence, that vary from my recollection of developments.

The introductory section of the paper impressed me as somewhat of an intermingling of what has occurred in workmen's compensation insurance, in a similar situation, and the reasons why an assigned risk plan is needed for automobile insurance. This intermingling of historical facts and logical thinking tends to obscure the motivating reasons that have prompted assigned risk plans for automobile insurance. To the average reader if this section were divided into a historical summary of what has occurred in workmen's compensation insurance and a statement of the need for comparable treatment in the automobile field the reader's interest could be aroused more quickly and enthusiastically. This section contains the only variance from history I noted and is a variation for which the author should not be held accountable because the incident referred to is not recorded so far as I know. About two years prior to the time that Industry groups began considering an automobile assigned risk plan the idea was outlined to me by my predecessor, Mr. R. C. Mead. I encouraged him to discuss his idea with A. E. Spottke and J. M. Muir to determine industry interest. This was done and their respective rating organizations took the initiative in translating the idea into a concrete form. This paper picks up at this point.

The paper contains a rather detailed discussion of the provisions included in the first automobile assigned risk plan placed in operation, which was in the state of New Hampshire. This is a worthwhile reporting because, by comparing it with the plans in prevalent use today, it is relatively easy to isolate the general areas where changes have been necessary either to meet public needs or to improve operational practice.

Included in the discussion of the New Hampshire plan is a fairly complete reproduction of the provisions of the plan. This general pattern of presentation is maintained throughout the paper.

If I were to offer a general suggestion for improving the readability of the paper it would be in the area of arrangement. I would favor removing the portions of lengthy quotations from the various Plans from the body of the text and incorporating them as a series of appendices. Such a shift would segregate the author's comments from the quoted matter and make it more easy for the casual reader to follow the author's discussion. As it stands there is some tendency for the reader's thoughts to be diverted toward specific Plan provisions rather than to follow the flow of historical facts.

The paper records the sequence in which a Plan, identical or similar to the New Hampshire Plan, was adopted for other states. This running comment is supplemented by a tabulation at the end of the paper showing, for each state, the effective date of the Plan for the state.

The first New York Plan is discussed in some detail because it contained important differences from the then prevailing plans. Some of these changes reflected modifications indicated as necessary because of experience and others were included to handle situations known to exist in a densely populated area. Of particular interest in this discussion is the "Interpretation of 'Good Faith'" which is still frequently referred to in coping with problems relating to this section of currently effective plans.

The development of the so-called "Uniform Plan" is clearly outlined. The manner in which the Uniform Plan was developed is significant. It demonstrates the way in which the industry and state regulatory bodies can cooperate to solve problems for the benefit of the buying public generally.

In his review of the Uniform Plan the author points out that the objective has been to attain essential rather than absolute uniformity. This concept, as he states, has not always existed but it is realistic and has resulted in greater support of the Uniform Plan than would have otherwise existed.

Certain of the vital sections of the Uniform Plan receive individual attention and comment. Historically this is desirable because this record of current thinking will be of value in charting the future developments of the Uniform Plan.

The last two sections of the paper are devoted to a summary of growth of automobile assigned risk plans and comments on the loss experience of risks handled by the plans.

The dollars of premium paid by assigned risks makes this an important segment of our business meriting attention to its administration. This volume of business becomes of greater stature when we consider the relatively high loss ratios which it develops.

The author closes his paper with a positive statement of the "service" value of the automobile assigned risk plans to the public and the industry. He cautions against becoming convinced the plans are now perfect. He also expresses confidence that present and future problems in this area can be solved within the framework of a free enterprise system.

This paper is a valuable contribution to the records of this Society and the author merits our thanks for a job skillfully and accurately executed. I would like to have this same author, or other member of the Society, prepare a paper examining the philosophy underlying the Uniform Plan provisions and detailing the steps that can, and should, be taken to limit the quantity of risks that find it necessary to use this facility to secure insurance. It is interesting to speculate on the decline in volume the assigned risk plans would enjoy if sound underwriting principles could be incorporated into driver licensing statutes.

STATISTICS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS

J. H. FINNEGAN

Volume XLIII, Part I, Page 82

DISCUSSION BY CLYDE H. GRAVES

Dr. Finnegan has presented in his paper "Statistics of the National Board of Fire Underwriters" a clear picture of the type of data on Fire and Allied Lines Insurance currently being collected by the National Board. In summary, the data may be grouped under the following headings:

(1) Fires Losses by Cause of Loss
(2) Premiums and Losses by Classification
(3) Expense Experience by State and Function
(4) Catastrophe Losses

The "Classification of Fire, Property Damage" presented in the appendix is the list of occupancy classifications adopted by the National Association of Insurance Commissioners as the "Uniform Statistical Plan." This plan has been adopted by most states as the basis for collecting fire and allied lines experience of all companies—stock, mutual and reciprocals. Dr. Finnegan makes some very brief remarks with respect to the development of this classification system indicating that it was a reduction from an original classification system containing 584 occupancy classes but he does not discuss the relationship of the classification system to the making of fire insurance rates. No doubt in selecting the title to his paper he purposely intended to limit the discussion to the type of premiums and losses data being collected by the National Board and to leave to others a discussion of the use of such data in rate making and rate reviews. From the data reported to the National Board, these three types of reports are prepared:

(1) An annual report of Premiums and Losses by Classification
(2) A report presenting the Premiums and Losses by Classification for a five-year period
(3) An earned premiums and incurred losses report.

Dr. Finnegan in his paper states that the National Board had developed a Statistical Plan for Earned Premiums and Incurred Losses which provides for a reporting of premiums by term of policy and "per cent of manual" as well as by state, Major Peril and Occupancy Class. An illustration is given showing how earned premiums for a given classification are calculated. It is to be noted that a modification of the statuatory factors are made based on a special report of countrywide Direct Written Premiums and contributions to "In Force." It would be of interest to know to what extent the statutory factors are modified by this adjustment and to what extent the earned premiums over a five-year period would differ from those calculated by the use of the statuatory factors unadjusted. Although the paper mentions that premiums are reported by "per cent of manual," it is not clear from the paper whether or not premiums are adjusted to a manual rate basis for the preparation of earned premium.

Dr. Finnegan states that "The Purpose of the Expense Plan was to produce for any given state and year figures representing total expenses on direct business for fire, extended coverage and other allied lines." This plan is essentially an extension of the Insurance Expense Exhibit which presents countrywide expense data. A plan whereby expense data for each state is produced appears to be necessary in view of the 1949 Profit Formula.

Only a brief paragraph is devoted to "Catastrophe Data" and it would be of value to have more information on this subject, especially as to use of catastrophe data in fire rate making.

In summary, Dr. Finnegan has presented an intersting paper outlining the statistical work of the National Board of Fire Underwriters. In view of the rather recent extension of the scope of activities of the Casualty Actuarial Society to include fire and allied lines, it would desirable if future papers were presented to the Society covering the use of the data collected by the National Board in the making of rates.

REVIEWS OF PUBLICATIONS

JOHN W. WIEDER, JR., Book Review Editor

Casualty Insurance, Clarence A. Kulp, Third Edition, The Ronald Press Co., New York, 1956, Pp. xi, 635.

It is axiomatic that any book on the broad subject of casualty insurance is out-of-date in some respect on the very day it comes off the presses, and that it becomes more outdated as the years go by. And yet, because the Revised Edition of this text, published 14 years ago, was, in Mowbray's words, "a well-planned, well-balanced treatise on casualty insurance," its continuing use created an insistent demand upon Dr. Kulp to bring forth the Third Edition.

The problem of definition of the term "casualty insurance" has always existed, but the trend in recent years to comprehensive policy writing and multiple line underwriting has made the definition even more difficult.

Dr. Kulp believes "that on present knowledge we cannot abandon forthwith either the concept or the title of casualty insurance." On this premise the Third Edition follows in broad outline the same pattern as the earlier edition.

The book is divided into the same three parts as before:

Hazard, Insurance, and Casualty Insurance
Casualty Hazards and Policies
Insurers, Rates, and Regulation

The three chapters comprising Part I have changed very little. Perhaps the most logical change is the inclusion in Chapter 3 of a general discussion on casualty underwriting principles and techniques. This very valuable material was formerly found in the Chapter on Burglary, Theft and Robbery Insurance.

Students of casualty insurance will have to await the next edition to find an appraisal of the new multiple-line underwriting laws and their effect on the business. Passage of these laws has necessitated a broadened outlook on the part of both casualty and fire insurers, and with the new outlook has come a host of new problems in underwriting, rating and regulation. It is unfortunate that the book was written so soon after these developments that the author can only report that "It is much too soon to appraise the full effect of the new multiple-line underwriting laws."

In Part II, in which the separate casualty lines are discussed in 11 chapters, the chapter on Credit Insurance has been omitted. As in the earlier edition, the author follows the same general scheme of presenting first, the nature of the hazard and need of insurance; second, the common policy coverages; and third, the rate scheme. Important developments of the last 14 years are included, for example the Workmen's Compensation small risk program, the Saskatchewan Plan for automobile compensation, the compulsory group disability laws, the occurrence versus accident insuring clause in liability contracts.

Part III is composed of the same 5 chapters as previously, with the chapter on reinsurance again written by Howard G. Crane, Vice President and Treasurer, General Reinsurance Corporation and North Star Reinsurance Corporation.

The last chapter, on Regulation of the Casualty Insurance Business, is naturally largely rewritten, since in the intervening years the great changes caused by the Southeastern Underwriters Association decision and Public Law 15 have occurred. Those who were active in the business during the crisis caused by the S.E.U.A. decision and events which followed will recognize this chapter to be a masterful treatment of a complex subject. Those newcomers to whom the still frequent references to S.E.U.A. and P.L. 15 are somewhat puzzling will welcome the clear presentation of events leading up to and following this period. In the role of prophet Dr. Kulp says "the ultimate decision on the old issue of state versus federal insurance regulation has not been made. It has been postponed."

The casualty insurance business is indebted to Dr. Kulp for making available a modern text that is, as the earlier edition, both scholarly and readable.

JOHN W. WIEDER, JR.

OBITUARY

MILTON ACKER

1891-1956

Milton Acker, Manager of the General Liability Division of the National Bureau of Casualty Underwriters, died at Memorial Hospital in New York City on August 16, 1956 after a period of illness. He was 64 years old.

Mr. Acker was recognized as a leading authority on general liability insurance and was regarded as one of the best informed men on developments in the general liability insurance field.

He was the senior member of the National Bureau of Casualty Underwriters staff in length of service, having joined the organization in 1913. His 43 years of association with the Bureau were interrupted only by his service in the Army in World War I. In August, 1918 he entered the Army and went to Camp Upton for training. In the fall of that year, he was sent to France for service with the U. S. Base Hospital Unit at Dijon, France and returned to this country in July 1919.

Mr. Acker was born November 19, 1891 in New York City. He was graduated from the College of the City of New York in 1911 with the degree of Bachelor of Science and then studied engineering for two years at Cornell University where he was awarded a degree in Mechanical Engineering in 1913. On July 1, 1913 he joined the staff of the Bureau, which was then the National Workmen's Compensation Service Bureau, as an Inspector for the New York City and Newark offices. Later he organized the Bureau's branch office in Hartford, Connecticut, and became its manager on March 15, 1915. He returned to the New York City office of the Bureau as Assistant Superintendent of the Inspection Department in 1918 and later that year entered military service. On his return from Army service abroad, he rejoined the staff of the Bureau in its Compensation and Liability Division and in 1924 became Manager of that Division.

Mr. Acker was one of those who have made major contributions to the work of building the Bureau through fine basic work. He devoted himself wholeheartedly to the profession of insurance. He was tireless in his endeavors on behalf of the Bureau and of the industry as a whole. He was a member of the Casualty Actuarial Society and of the American Association of University Teachers of Insurance and for many years he conducted a course of lectures on casualty insurance at Columbia University. His articles and lectures on technical subjects in his sphere of work have always been regarded as authoritative and valuable sources of information.

Outside of his work music was his chief interest. He was regularly a season subscriber to the New York Philharmonic Symphony Orchestra concerts. He was himself an accomplished pianist and played with fine musical taste. In his New York apartment he often gave

Sunday afternoon musicales in which well known singers and pianists performed for his friends.

His associates and all who knew him well remember Mr. Acker for his sincerity, honesty, earnestness and loyalty.

OBITUARY

ARTHUR G. SMITH

1894-1956

Arthur G. Smith, Associate Manager of the New York Compensation Insurance Rating Board, died suddenly in Phoenix, Arizona, on May 2, 1956 of coronary thrombosis.

He was born in Brooklyn, N. Y., on December 5, 1894, and was educated at Erasmus High School in Brooklyn and Cornell University in Ithaca, N. Y. He served as a Lieutenant in the United States Army during World War I. After an honorable discharge from the Army, he entered the employ of the New York State Insurance Department in Albany and remained with the Department until 1920. Shortly thereafter, he was employed in the Compensation and Insurance Rating Bureau of New Jersey in Newark, New Jersey. He became an Associate of the Society on November 18, 1921.

In 1923, Mr. Smith entered the employ of the Compensation Inspection Rating Board as an Auditor in the Statistical Division. In 1927, he was promoted to the position of Treasurer and Actuary, and in 1931 he became Assistant General Manager. He served in that position until 1950 when he was promoted to Associate Manager. He worked closely with the Classification and Rating Committee of the Board, which placed the highest value on his leadership, his understanding of the classification system and Manual rules, and his contribution to sound principles in that field. Mr. Smith also represented the Board at meetings of the National Council on Compensation Insurance and was a member of the Special Committee which established the 1934 Manual. He had thirty-three years' service with the Board.

Because of illness, he found it necessary to retire on January 1, 1956, and went to Phoenix, Arizona, to try to regain his health.

Mr. Smith was a man of high integrity and possessed many fine qualities. He is survived by his wife and three sisters.

OBITUARY

CHARLES A. WHEELER

1882-1956

Charles A. Wheeler passed to his reward on July 2, 1956 after several years of failing health.

Born in Norwich, N. Y., he was graduated from primary and secondary schools in that area. He entered the service of the State of New York in May, 1904. In December 1907 he was appointed to the Statistical Bureau in the Albany Office of the Insurance Department, where he served until December, 1909. At that time he was appointed to the position of Examiner in the New York Office of the Department, which appointment was to launch an illustrious career and see him serve with distinction in the conduct of examinations of the largest Casualty and Surety insurers.

He attained the pinnacle of his career in January 1929, when he was appointed Chief of the then Casualty Bureau of the Department. In such position he served as advisor and consultant to Superintendents of Insurance and their Deputies. He also represented the Superintendent on many important committees and subcommittees of the National Association of Insurance Commissioners. He continued in that position until his retirement in December, 1951. The Department lost one of the most illustrious members of its staff when he decided to retire on December 31 of that year.

His was the great ability to train Examiners assigned to his Bureau. Many who were privileged to work with and for him, went on to important positions both within and without the Department.

He was a man who loved life and knew how to enjoy the simple things of life. He was ever ready with a humorous story to enliven any gathering at which he was present.

In his passing the State lost one of its most distinguished servants, and Insurance supervision one of its outstanding personalities.

OBITUARY

CHARLES E. WOODMAN

1877-1955

Charles E. Woodman, an Associate of the Society, died December 16, 1955 at his home in Waterville, New York.

He was born on August 2, 1877. During his long insurance career he served as Chief Examiner, Casualty Companies, of the New York Insurance Department and he was Comptroller of the Ocean Accident and Guarantee Corporation, Limited, from September 1918 until his retirement in October 1945. He became an Associate of the Casualty Actuarial Society in October 1915.

He was a congenial man and an ideal host, highly esteemed by his many friends. His associates respected his clear thinking and logic. He never spared himself when there was a task to be done and inspired to their best efforts, those under his supervision.

Mr. Woodman is survived by his widow, Agnes V. Woodman and sons Robert C. and Richard S. Woodman.

MINUTES OF THE MEETING

May 24 and 25, 1956

CURTIS HOTEL, LENOX, MASS.

The Spring 1956 meeting of the Casualty Actuarial Society was held at the Curtis Hotel in Lenox, Massachusetts. An informal buffet supper was held on the evening of May 23rd for early arrivals. The early arrivals were indeed fortunate in that, after the collation, they enjoyed a most interesting talk, illustrated with color slides, by John A. Mills who related his observations and experiences on his recently completed trip around the world.

On Thursday, May 24, after breakfast, the gathering heard a lively panel discussion on "The Uninsured Motorist Problem" with Ralph H. Blanchard as moderator of the four panel members who led off on the following subdivisions of the topic:

H. E. Curry—"Other Solutions Than A Workmen's Compensation System."

M. S. Hughey—"If a Compulsory Law is Adopted, What Should It Provide?"

F. C. Maynard, Jr.—"Workmen's Compensation Approach to the Problem."

H. W. Yount—"What Has Been the Experience with a Compulsory Law?"

After luncheon, the Educational Committee held an open meeting for discussion of "The Society's Membership Requirements."

The informal dinner, on the evening of May 24, was preceded by a cocktail hour. At the dinner, Past President Charlie Haugh, performed his usual flawless job as Master of Ceremonies. The guest speaker was Harry G. Waltner, Jr., Insurance and Social Security Department of Standard Oil of New Jersey. The Society expressed its gratitude to Mr. Waltner who had most graciously consented to fill in on the program at extremely short notice when, at almost the last moment, circumstances unfortunately prevented the attendance of another speaker who had been expected.

The May 25th session was called to order at 10:20 A.M. by President Masterson. The registration showed the following 47 Fellows and 17 Associates present:

FELLOWS

ALLEN, E. S.	GODDARD, R. P.	KOLE, M. B.
BARBER, H. T.	GRAHAM, C. M.	KORMES, M.
BARKER, G. M.	GRAVES, C. H.	KULP, C. A.
BERKELEY, E. T.	HAZAM, W. J.	LA CROIX, H. F.
BEVAN, J. R.	HEWITT, C. C.	LINDER, J.
BLANCHARD, R. H.	HOPE, F. J.	LISCORD, P. S., JR.
ELLIOTT, G. B.	HUGHEY, M. S.	LONGLEY-COOK, L. H.
FAIRBANKS, A. V.	HURLEY, R. L.	MACKEEN, H. E.
FOWLER, T. W.	JOHE, R. L.	MASTERSON, N. E.

MATTHEWS, A. N.	PRUITT, D. M.	SMICK, J. J.
MAYCRINK, E. C.	RESONY, A. V.	VALERIUS, N. M.
MCCONNELL, M. H.	RODERMUND, M.	WAITE, A. W.
MENZEL, H. W.	SALZMANN, R.	WIEDER, J. W. JR
MILLS, J. A.	SCHLOSS, H. W.	WOLFRUM, R. J.
MURRIN, T. E.	SKELDING, A. Z.	YOUNT, H. W.
PETZ, E. F., JR.	SKILLINGS, E. S.	

ASSOCIATES

ANDREWS, E. C.	GROSSMAN, E. A.	OTTESON, P. M.
BONDY, M.	HART, W. VAN BUREN, JR.	SCAMMON, L. W.
COATES, W. D.	HART, WARD VAN B., SR.	SCHULMAN, J.
CRAWFORD, W. H.	KALLOP, R.	STOKE, K.
FRANKLIN, N. M.	LINO, R.	THOMAS, J. W.
FURNIVALL, M. L.	MCDONALD, M. G.	

The following candidates, having successfully met the requirements of the Society, were admitted as Fellows:

E. W. Day—Resident Secretary, Lumbermen's Mutual Casualty Company.

J. H. Finnegan—Manager, Actuarial Bureau, The National Board of Fire Underwriters.

D. A. Tapley—Associate Actuary, State Farm Mutual Automobile Insurance Co.

"Doc" Masterson then read his presidential address "Insurance Language Problems."

The following new papers were presented in summary form and will be reproduced in full, in the "Proceedings":

Frank Harwayne—"A Review and Comparison of Workmen's Compensation Experience in New York State and Wisconsin".

Elden W. Day—"A History of Uniform Automobile Assigned Risk Plan".

J. H. Finnegan—"Statistics of the National Board of Fire Underwriters".

The following written discussions of previous papers were then presented:

Paper by Barney Fratello—"The 'Workmen's Compensation Injury Table' and Standard Wage Distribution Table—Their Development and Use in Workmen's Compensation Insurance Ratemaking"—Reviews by L. W. Scammon and J. H. Boyajian (read by N. M. Valerius in Mr. Boyajian's absence).

Paper by A. V. Fairbanks—"Notes on Non Cancellable Health and Accident Ratemaking"—Reviews by W. B. Hart, S. W. Gingery (read by M. L. Furnivall).

Paper by E. C. Andrews—"Observations on State Taxation of Casualty and Fire Insurance Companies"—Reviews by E. C. Maycrink, J. W. Resony (read by A. V. Resony).

This completed the program and, upon motion, the meeting was adjourned.

MINUTES OF THE MEETING

November 15 and 16, 1956

BARBIZON-PLAZA HOTEL, NEW YORK, N. Y.

The annual meeting of the Society was held at the Barbizon-Plaza Hotel, New York City, on November 15 and 16, 1956, the business meeting being held on the second of these two days.

The November 15th session was called to order at 2:15 P.M. with President Masterson presiding.

There followed a panel discussion on the subject "Recent Multiple Line Developments", with A. S. Kuenkler, moderator, assisted by the following panel which discussed the following sub-divisions of the topic:

(a) Homeowners and Analogous Comprehensive Policies—Roy C. McCullough
(b) Mercantile Block Policies—Paul S. Liscord, Jr.
(c) Single vs. Combined Ratemaking—W. S. Gillam, C. H. Graves
(d) Regulatory Phases—J. A. Resony, Julius Wikler

After recess, there was an informal dinner preceded by a cocktail hour. The guest speaker at the dinner, Roger Kenney, Insurance Editor of the U. S. Investor, was introduced by J. F. Gildea, toastmaster.

The November 16th session was called to order by President Masterson at 10:15 A.M. The roll call showed the following 70 Fellows and 35 Associates present:

FELLOWS

AINLEY, J. W.
ALLEN, E. S.
BAILEY, R. A.
BARBER, H. T.
BARKER, G. H.
BARTER, J. L.
BENNETT, N. J.
BERKELEY, E. T.
BEVAN, J. R.
BLANCHARD, R. H.
BONDY, M.
BOYAJIAN, J. H.
CAHILL, J. M.
CARLSON, T. O.
COOK, E. A.
CURRY, H. E.
ELLIOTT, G. B.
FINNEGAN, J. H.
FONDILLER, R.
FOSTER, R. B.
GARDINER, J. B.
GINSBURGH, H. J.
GRAVES, C. H.
GODDARD, R. P.
HART, W. V. B., JR.
HARWAYNE, F.
HEWITT, C. C.
HOPE, F. J.
HURLEY, R. L.
JOHE, R. L.
JOHNSON, R. A.
KALLOP, R. H.
KORMES, M.
KUENKLER, A. S.
KULP, C. A.
LESLIE, W., JR.
LINDER, J.
LINO, R.
LISCORD, P. S., JR.
LIVINGSTON, G. R.
MACKEEN, H. E.
MARSHALL, R. M.
MASTERSON, N. E.
MATTHEWS, A. N.
MAYCRINK, E. C.
MILLS, J. A.
MCCONNELL, M. H.
MENZEL, H. W.
MUETTERTIES, J. H.
MUNTERICH, G. C.
MURRIN, T. E.
OBERHAUS, T. M.
PERRYMAN, F. S.
PETERS, S.
PRUITT, D. M.
RESONY, A. V.
RESONY, J. A.
RODERMUND, M.
RUCHLIS, E.
SALZMANN, R.

SKELDING, A. Z.
SKILLINGS, E. S.
SMICK, J. J.
SMITH, S. E.
TAPLEY, D. A.
THOMAS, J. W.
UHTHOFF, D. R.
VALERIUS, N. M.
WIEDER, J. W., JR.
WOLFRUM, R. J.

ASSOCIATES

BERG, R. A., JR.
BERQUIST, J. R.
BLACK, N. C.
BORNHUETTER, R.
COATES, W. D.
CONTE, J. P.
DORF, S.
DROPKIN, L. B.
FLACK, P. R.
FRANKLIN, N. M.
GILLAM, W. S.
HARACK, J.
HART, W. V. B., SR.
JONES, N. F.
KLAASSEN, E. J.
MAKGILL, S. S.
MATHWICK, L. F.
MCDONALD, M. G.
OTTESON, P. M.
PERKINS, W. J.
PHILLIPS, H. J., JR.
PINNEY, A. D.
ROBERTS, L. H.
SCAMMON, L. W.
SCHULMAN, J.
SCHWARTZ, M. J.
SMITH, E. M.
STERN, P. K.
STOKE, K.
TARBELL, L. L., JR.
UHL, M. E.
WILLIAMS, P. A.
WILSON, J. C.
WOODWORTH, J. H.
WRIGHT, B.

In addition, a number of invited guests were present.

The first order of business was the presentation of the report of the Secretary-Treasurer. The meeting voted to accept this report, copy of which is attached to these minutes.

It was voted to dispense with the reading of the minutes of the meeting of May 24 and 25, 1956.

The President announced the death during the last year of the following Associates:

Milton Acker
Arthur G. Smith
Charles A. Wheeler
Charles E. Woodman

Diplomas were then presented to the following new Fellows, admitted at this meeting:

Bennett, N. J.
Bondy, M.
Boyajian, J. H.
Hart, W. V. B., Jr.
Kallop, R. H.
Lino, R.
Muetterties, J. H.
Thomas, J. W.

Diplomas were also presented to the following Fellows who had been admitted at the May 1956 meeting:

Day, E. W. (in absentia)
Finnegan, J. H.
Tapley, D. A.

It was also announced that the following were newly enrolled as Associates:

Berg, R. A., Jr.	Flack, P. R.	Roberts, L. H.
Bornhuetter, R. L.	Klaassen, E. J.	Smith, E. M.
Dorf, S.	Makgill, S. S.	Stern, P. K.
Drobisch, M. R.	Mathwick, L. F.	Tarbell, L. L., Jr.
Dropkin, L. B.	Phillips, H. J., Jr.	Williams, P. A.
Faust, J. E., Jr.	Pinney, A. D.	Woodworth, J. H.

The annual election of Officers was held and the following results were announced:

President	Norton E. Masterson
Vice-President	Clarence A. Kulp
Vice-President	Arthur N. Matthews
Secretary-Treasurer	Albert Z. Skelding
Editor	Edward S. Allen
Librarian	Gilbert R. Livingston
Chairman—Examination Committee	John W. Wieder, Jr.

Members of the Council (Term Expires 1959)

John A. Resony
William J. Hazam
Ernest T. Berkeley

Mr. Masterson then read his Presidential Address "The Actuary's Niche."

The following new papers were presented:

Martin Bondy—"The Rate Level Adjustment Factor in Workmen's Compensation Ratemaking."

Philipp K. Stern—"Current Rate Making Procedures for Automobile Liability Insurance."

D. A. Tapley—"Month of Loss Deficiency Reserves for Automobile Bodily Injury Losses Including Reserves for Incurred but not Reported Claims."

Reviews of previous papers then followed:

Elden W. Day—"A History of Uniform Automobile Assigned Risk Plan."
Reviewed by H. E. Curry.

Frank Harwayne—"A Review and Comparison of Workmen's Compensation Experience in New York State and Wisconsin."
Reviewed by D. R. Uhthoff.

J. H. Finnegan—"Statistics of the National Board of Fire Underwriters."
Reviewed by C. H. Graves.

G. F. Michelbacher—"The Multiple-line Principle."
Reviewed by L. H. Longley-Cook (read by M. H. McConnell).

After a recess for luncheon there followed a lively informal discussion from the floor, led by Dudley Pruitt on the topic "What is Current in Electronics Among Insurance Companies." Among those who spoke were the following members of the Society: H. W. Schloss, Ward V. B. Hart, Jr., George C. Munterich, R. J. Wolfrum. In addition, Messrs. L. L. van Oosten, Director of Research, Allstates Insurance Company and G. D. Viste, Director of Research, Employers Mutual of Wisconsin, addressed the gathering.

Upon motion the meeting adjourned at 4:00 P. M.

For the purpose of the record, there is appended a list of those who passed the examinations held by the Society on May 14 and 15, 1956.

REPORT OF SECRETARY-TREASURER—NOVEMBER 16, 1956

This report summarizes the activities of the Council subsequent to the November 1955 Annual Meeting of the Society and presents the financial report of the Secretary-Treasurer for the period October 1, 1955 through September 30, 1956.

(1) *Future Meetings.*
The Council has set the following dates and sites for future meetings:
(a) Spring of 1957—May 23rd and 24th at the French Lick-Sheraton Hotel in French Lick, Indiana
(b) Fall of 1957—November 21st and 22nd at the Sheraton Hotel in Philadelphia, Pa.

(2) *Editor, Librarian and General Chairman of Examination Committee.*
At the meeting of the Council on November 15, 1956 at the Barbizon-Plaza Hotel, the Council reelected the following:

Editor	Edward S. Allen
Librarian	Gilbert R. Livingston
General Chairman—Examination Committee	John W. Wieder, Jr.

As provided by the Constitution, these elections by the Council are subject to confirmation by majority ballot of the Society at this meeting.

(3) *Examinations.*
(a) May 9th and 10th have been set as the dates of the 1957 examinations.
(b) The Council adopted the recommendations of the Educational Committee with respect to the following changes:

(1) Eliminate as required reading for Part I (a) of the Associateship examinations, the text "Introduction to Mathematical Statistics" by P. G. Hoel and substitute therefor "Modern Elementary Statistics" by John E. Freund with "An Introduction to Statistical Analysis" by C. H. Richardson to be continued as a source of additional examples. Also, in connection with Fellowship Part III (b) "Advanced Problems in Insurance Statistics" the reference on page 17 of the Syllabus to the Statistical Plan of the Bureau of Personal Accident and Health Underwriters is eliminated as this Plan is no longer in effect.

(c) The Council confirmed the recommendation of the Secretary-Treasurer that the closing date for registering for the examinations be changed from February 15 to March 1st.

(d) The Council approved the recommendation of the Educational Committee that, beginning with the 1957 examinations, candidates for Part I or Part II of the Associateship examinations may write any or all of the four sections and will receive credit for any section or sections passed. The examination time allotted for each section is to be 1½ hours. Also, in view of the complications brought about in integrating credits and other requirements for candidates who have passed sections of the examinations under the old syllabus and who are now striving to meet the requirements of the present syllabus the examination fee schedule is revised to provide the following fee schedule:

$1.50 for a Half Part (One Section)
3.00 for a Full Part
Minimum fee—$5.00

(e) The paper "Workmen's Compensation Ratemaking" by R. M. Marshall and the paper "Workmen's Compensation Injury Table and Standard Wage Distribution Table" by Barney Fratello, which appear in Volumes XLI and XLII, respectively, of the "Proceedings" have been added to the list of required readings for Part IV (b) of the Associateship examinations. The previous reprint of Mr. Marshall's paper proved quite popular and was completely sold out. As the demand is continuing, the Council authorized a second printing of Mr. Marshall's paper, together with a first printing of Mr. Fratello's paper. Both of these valuable papers are now available from the Society at a cost of $1.50 each.

(4) *Finances.*

I will now read the receipts and expenditures report of the Secretary-Treasurer for the period October 1, 1955 through

September 30, 1956. As usual, this report will appear in the "Proceedings". On several occasions in the past, expenditures have exceeded income. During the fiscal period just closed, expenditures exceeded income by $1988.60.

In view of this situation the President, subsequent to the Council meeting of October 3, 1956, appointed a Special Committee to explore

(a) the possibility and desirability of attempting to secure contributions to the Society from organizations and associations of the industry,
(b) the necessity of increasing dues.

The Special Committee consists of E. S. Allen, J. A. Mills, H. W. Schloss, Seymour E. Smith and A. Z. Skelding (Chairman). The Committee held its first meeting at the Barbizon-Plaza Hotel on November 15, 1956. The Committee recommended to the Council that no action be taken at this time with respect to attempting to receive subsidization or contributions from the insurance carriers or organizations of the industry. On the other hand, the Committee recognized that something must be done to put the financial affairs of the Society on a more stable and realistic basis than has been the case in the past. Accordingly, it was recommended that beginning with the coming year, dues be increased 50%, provided that there be no change in dues with respect to members residing outside of the United States or Canada, and waiver of dues for members in the armed forces be continued. This means the following new scale of dues:

Fellows	$30.00*
Associates (first five years)	15.00*
Associates (after five years)	30.00*
Dues waived for members in the Service	

*$10. for other than residents of U. S. or Canada

The Council voted unanimosuly to adopt this revised fee schedule.

Respectfully submitted
ALBERT Z. SKELDING
Secretary-Treasurer

1956 EXAMINATIONS—SUCCESSFUL CANDIDATES

Following is a list of those who passed the examinations held by the Society on May 14 and 15, 1956:

ASSOCIATESHIP EXAMINATIONS

PART I (a) and (b)	Bierschbach, R. A.	Fitzgibbon, W. J., Jr.	Phillips, H. J., Jr.
	Blumenfeld, M. E.	Houston, D. B.	Riccardo, J. F., Jr.
	Brockett, J. L.	Hunt, F. J., Jr.	Simoneau, P. W.
	Byrne, H. T.	Linden, J. R.	Wakely, D.
	Crowley, J. H., Jr.	Mohnblatt, A. S.	Weber, D. C.
	Deighton, R. E.	Notto, R. W.	Wilcken, C. L.
PART I (a)	NONE		
*PART I (b)	Abel, F. E.	Goddard, A. C.	Royer, A. F.
	Alexander, L. M.	Klein, O. R., Jr.	Stankus, L. M.
	Fratello, B.	Mathwick, L. F.	Woodworth, J. H.
		McLean, G. E.	
PART II (a) and (b)	Bell, H.	Byrne, H. T.	Peel, J. P.
	Bilisoly, R. S.	Dwyer, J. T.	Phillips, H. J., Jr.
	Blodget, H. R.	Feldman, M. F.	Roberts, K. W.
	Bohn, R. J.	Grubb, H. J., Jr.	Tucker, T. F.
	Boyle, J. I.	Hunt, F. J., Jr.	Wakely, D.
	Brockett, J. L.	Jamieson, J. H. S.	Wilcken, C. L.
*PART II (a)	Amlie, W. P.	Fratello, B.	Mathwick, L. F.
	Bernath, O. F.	Goddard, A. C.	Roberts, L. H.
	Davey, G. E. R.		Stankus, L. M.
PART II (b)	Schlenz, J. W.		
PART III (a) and (b)	Alexander, L. M.	Drobisch, M. R.	Ozanick, E. M.
	Bernat, L. A.	Dropkin, L. B.	Parry, A. E.
	Bornhuetter, R. L.	Jamieson, J. H. S.	Richardson, W. S.
	Boyle, J. I.	Klaassen, E. J.	Roberts, L. H.
	Burney, C. T.	McGuinness, J. S.	Schlenz, J. W.
	Coen, F. J.	McNamara, D. J.	Schneiker, H. C.
	Copestakes, A. D.	Niles, C. L., Jr.	Van Cleave, M. E.
	Dorf, S. A.		Walsh, A. J., Jr.
PART IV (a) and (b)	Berg, R. A., Jr.	Flack, P. R.	Richardson, W. S.
	Burney, C. T.	Flanagan, R. M.	Smith, E. M.
	Carrick, W. R., Jr.	Klaassen, E. J.	Snowden, H. W., Jr
	Carson, D. E. A.	McGuinness, J. S.	Tarbell, L. L., Jr.
	Copestakes, A. D.	Makgill, S. S.	Waldo, M. L.
	Dorf, S.	Michalewicz, H. J.	Walsh, A. J., Jr.
	Faust, J. E., Jr.	Parry, A. E.	Wasserzug, L.
	Feldman, M. F.	Pinney, A. D.	Williams, P. A.

* Credit for other section previously granted.

FELLOWSHIP EXAMINATIONS

PART I (a) and (b)	Andrews, E. C. Bornheutter, R. L. Coates, W. D. Dropkin, L. B.	Gillam, W. S. Hart, W. V. B., Jr. Makgill, S. S. Mayerson, A. L.	Pinney, A. D. Smith, E. M. Tarbell, L. L., Jr. Williams, P. A.
PART II (a) and (b)	Berquist, J. R. Drobisch, M. R. Dropkin, L. B.	Eide, K. A. Mills, R. J. Muetterties, J. H. Otteson, P. M.	Perkins, W. J. Thomas, J. W. Williams, D. G.
*PART II (b)	Daniel, C. M.	Kallop, R. H.	Mayerson, A. L.
PART III (a) and (b)	Bennett, N. J. Berquist, J. R. Coates, W. D.	Hart, W. V. B., Jr. Kates, P. A. Lino, R.	Mills, R. J. Muetterties, J. H. Otteson, P. M.
*PART III (b)	Boyajian, J. H.		Bondy, M.
PART IV (a) and (b)	Bennett, N. J.		Hannssler, H. W.

* Credit for other section previously granted.

NEW ASSOCIATES

The following candidates, having been successful in completing the examinations, will be admitted as Associates of the Society as of the date of the Annual Meeting in November 1956:

Berg, R. A., Jr.	Flack, P. R.	Pinney, A. D.
Bornhuetter, R. L.	Klaassen, E. J.	Roberts, L. H.
Dorf, S. A.	Makgill, S. S.	Smith, E. M.
Drobisch, M. R.	Mathwick, L. F.	Tarbell, L. L., Jr.
Dropkin, L. B.	Phillips, H. J., Jr.	Williams, P. A.
Faust, J. E., Jr.		Woodworth, J. H.

NEW FELLOWS

The following Associates, having been successful in completing the examinations, will be admitted as Fellows of the Society as of the date of the Annual Meeting in November 1956:

Bennett, N. J.	Kallop, R. H.
Bondy, M.	Lino, R.
Boyajian, J. H	Muetterties, J. H.
Hart, W. V. B., Jr.	Thomas, J. W.

CASUALTY ACTUARIAL SOCIETY

Cash Receipts and Disbursements from October 1, 1955 to September 30, 1956

Income

On deposit in Chase Manhattan—October 1, 1955		$ 5,303.56
Members Dues	$4,740.00	
Sale of Proceedings	1,422.39	
Examination Fees	1,027.00	
Luncheons & Dinners	1,750.73	
Interests on Bonds	62.50	
Sale of Reprints	169.00	
Michelbacher Fund	381.22	9,552.84
Total		$14,856.40

Disbursements

Printing & Stationery	$8,560.65
Postage, Tel., Exp., etc.	6.12
Secretarial Work	600.00
Examination Expense	647.89
Luncheons & Dinners	1,405.52
Library Fund	8.76
Insurance	12.50
Storage	116.50
Refunds	57.00
Miscellaneous	126.50
Total	$11,541.44
On deposit 9-30-56 in Chase Manhattan	3,314.96
Total	$14,856.40

Assets

Cash in Bank 9-30-56	$3,314.96	
U. S. Savings Bonds	5,000.00	
		$ 8,314.96

Liabilities

Michelbacher Fund 9-30-56	$ 7,514.94
Other Surplus	800.02
Total Liab. & Surplus	$ 8,314.96

* * *

One 12 Yr. U. S. Savings Bond 2½% Series G, No. M6,756,060G due for $1,000 on Nov. 1, 1960.

Four 12 Yr. U. S. Savings Bonds 2½% Series G, No. M7,228,102G-103G-104G-105G due for $4,000 on October 1, 1961.

U. S. Fire Insurance Company Policy No. 109221 for $5,000 on Proceedings stored at Chelsea Fireproof Storage Warehouse; $2,000 on books kept in N. Y. Insurance Society Library. Expires September 14, 1957.

Surety Bond for $5,000 in the Royal Indemnity Company.

* * *

This is to certify that we have audited the accounts, examined all the vouchers and investments shown above and find same to be correct.

In this examination, it has been noted that there are no dues outstanding. The item Interest on Bonds of $62.50 includes only one semi-annual interest payment. The other semi-annual interest payment of $62.50 normally receivable during the period was not received until after September 30, 1956 and, accordingly, will be reflected in the financial report for the period October 1, 1956 to September 30, 1957.

(Sgd.) *H. G. Crane*

Chairman, Auditing Committee

November 2, 1956

EXAMINATION FOR ENROLLMENT AS ASSOCIATE

PART I

MAY 14, 1956 TIME 9:30 TO 12:30 O'CLOCK

SECTION (a)

1. In the following table, X equals the value of crops (dollars per acre) and Y equals value of land and buildings (dollars per acre) in five counties of Illinois in 1930:

X	Y
7	40
14	130
13	90
9	60
4	20

(a) Find the equation of the regression line of Y on X (express each constant as a whole number only) and interpret the value of the coefficient of X in this equation.

(b) Compute to one decimal place the standard error of estimate of the observed Y values from the Y values estimated by the line of regression determined under (a).

(c) From the data given above compute the Bravais-Pearson coefficient of correlation.

2. (a) Where M = mean, show that:

$$\sigma^2_{x+y} = \sigma^2_x + \sigma^2_y + 2\,[M_{xy} - M_x\,M_y]$$

(b) If ν_2 and ν_3 denote moments of the distribution about the true mean, ν_2' and ν_3' denote moments of the distribution about the guessed mean, with $b_x = \nu_1$, and if the class interval is taken as a unit, i.e. $w = 1$, show that:

$$\nu_2 = \nu_2' - b_x^2$$
$$\text{and } \nu_3 = \nu_3' - 3\,\nu_2\,b_x - b_x^3$$

3. Using the method of least squares, fit a second degree parabola to the following data, and state the reason for your choice of this type of curve.

x	y
-1	-4
0	-3
1	0
2	5
3	12

4. (a) Strength tests were made on ten specimens from each of two types of wool fabric. The mean and standard deviation were 134.0 lbs. per sq. in. and 6.05 lbs. per sq. in. respectively for the ten specimens of type 1 and 138.8 lbs. per sq. in. and 4.09 lbs. per sq. in. respectively for the ten specimens of type 2. Given $A_\phi]_0^{1.96} = .4750$ for the standard normal curve, test to see whether the difference in means is sufficient to warrant the conclusion at the 5% level of significance that there is a difference in the strength of the two types.

(b) In a college the 12 grades A+, A, A−; B+, B, B−; C+, C, C−; D, E, and F are given. On the assumption that ability in mathematics is normally distributed, how many in a group of 750 grades should receive the B+ grade? How many would receive grades of D or lower? Assume the total range is $M \pm 3.6\sigma$.

Given: $A_\phi]_0^{1.8} = .4641$ $\quad A_\phi]_0^{1.2} = .3849$ $\quad A_\phi]_0^{3.6} = .4998$

SECTION (b)

5. (a) If m different odd integers and n different even integers be written down at random, prove that in the resulting number the chance that no two odd integers are adjacent to one another is

$$\frac{n!(n+1)!}{(m+n)!(n-m+1)!}$$

m being not greater than n+1

(b) Four different objects, 1, 2, 3, and 4 are distributed at random on four places marked 1, 2, 3, and 4. What is the probability that none of the objects occupies the place corresponding to its

6. (a) Before a race the chances of three runners A, B, C were estimated to be proportional to 5, 3, 2; but during the race A meets with an accident which reduces his chance to one-third. What are now the respective chances of B and C?

(b) Three players A, B, and C of equal skill agree to play a series of games under the following rules: Two players participate in each game while the third is idle; the winner then engages the player who was idle. The player who first succeeds in winning over both his opponents without interruption is declared the winner of the whole series of games. If A and B play the first game, find the probability of each player to win the whole series of games.

7. (a) Four persons draw each a card from an ordinary pack. Find the chance:

(i) that a card is of each suit

(ii) that no two cards are of equal value

(b) Two persons whose probabilities of speaking the truth are $2/3$ and $5/6$ respectively, assert that from a bag containing 15 tickets numbered from 1 to 15, ticket 12 has been drawn. What is the probability of the truth of the assertion?

8. (a) A and B each have eight pennies. Each tosses his set of pennies. Find the chance that the number of heads obtained by A exceeds the number obtained by B by at least three.

(b) A bag contains 5 balls of unknown color; a ball is drawn and replaced twice, and in each case is found to be red; if two balls are now drawn simultaneously, find the chance that both are red.

PART II

MAY 14, 1956 TIME 1:30 TO 4:30 O'CLOCK

SECTION (a)

1. Prove the following identities:

(a) $v^n = v\,\ddot{a}_{\overline{n}|} - \ddot{a}_{\overline{n-1}|}$

(b) $${}_{10|10}\ddot{a}_x = \frac{{}_{10}u_{x+10} \cdot {}_{30|}\ddot{a}_x}{{}_{10|}\ddot{a}_{x+20}}$$

(c) $A_x = v\,(q_x + p_x\,A_{x+1})$

2. (a) Prove that $\frac{1}{i} > a_x$

   (b) Express in commutation symbols, the present value of a promise to pay to a man aged 33, $100 every year for 27 years, followed by $200 every year for 5 years, first payment to be made immediately.

3. (a) The death benefit under a life insurance policy is $20,000. The policy provides that, at the death of the insured, the beneficiary may elect one of the following options in lieu of the $20,000 cash.

   (i) A 20-year annuity certain due.

   (ii) A whole-life annuity due.

   (iii) A whole-life annuity due with the provision that the first 10 payments will be made whether the original beneficiary is alive to receive them or not.

   Express in commutations symbols the annual payment under each option if the beneficiary is 50 years old at the date of death of the insured.

   NOTE: Option (iii) may be regarded as the sum of an annuity certain and a deferred life annuity.

   (b) A common life insurance policy provides that for a whole-life benefit, the premium for the first five years is half the ultimate premium (i.e., the premium for the sixth and subsequent years). Find the ultimate net premium for such a policy with a face amount of $1000, issued to a person aged 45

$$\text{Given: } N_{45} = 5{,}161{,}996$$
$$N_{50} = 3{,}849{,}488$$
$$M_{45} = 154{,}737$$

4. Define "terminal reserve" from the retrospective point of view and use the definition as a basis for deriving Fackler's accumulation formula.

SECTION (b)

5 (a) List, with short explanations, the major purported causes of business instability.

(b) What are the four instruments of corporate finance used to provide long term permanent capital funds and what does each represent?

6. (a) Why might the stock of a well-managed fire insurance company seem attractive to an investor?

(b) Define the following:

(i) Call bonds.

(ii) Convertible bonds.

(iii) Bonds with detachable purchase warrants.

(iv) Stabilized bonds.

7. (a) How may stock non-life insurance companies be likened to an investment trust? Explain.

(b) Distinguish between Willet's "static" and "dynamic" risks. Why is the risk of "dynamic" loss greater than the risk of "static" loss?

8. It has been said that in order that an insurance contract may operate

equitably, produce the desired benefits, and be practical from a business point of view, the following five conditions are necessary:

(i) The insured must be subject to a real risk.

(ii) The risk must be important.

(iii) The cost of insurance must not be prohibitive.

(iv) A large number of risks is necessary.

(v) The risk must be capable of approximation.

Discuss each condition briefly.

PART III

MAY 15, 1956 TIME 9:30 TO 12:30 O'CLOCK

SECTION (a)

1. (a) What are the provisions of the first four sections of Public Law 15?

   (b) "Present state rating laws are diametrically opposed in letter and in spirit to the Sherman Act," Do you agree? Discuss.

2. (a) Mutual fire, marine, casualty, and surety companies are permitted to write non-assessable policies under the laws of many states if the mutual company can meet certain requirements concerning its by-laws or charter, its surplus, deposits of securities, and policy language. State the requirements of the New York law concerning the surplus needed by a mutual company before the Superintendent can give permission to write non-assessable policies.

   (b) What data must be submitted by a foreign insurer in order to obtain a license to do an insurance business in the State of New York? By an alien insurer?

3. (a) In insurance parlance, what is meant by the phrase, "A retaliatory law"? Illustrate.

(b) In the Federal Employers' Liability Act, the doctrine of comparative negligence is substituted for the defense of contributory negligence. To whom does this act apply and what is the effect of this substitution.

4\. (a) Line 18 of Page 10 of the Convention form of the Fire and Casualty Annual Statement, "Taxes, licenses, and fees", is subdivided into the following subsections:

a. State and local insurance taxes

b. Insurance department licenses and fees

c. Payroll taxes

d. All other (excluding Federal and foreign income and real estate)

For each of these subsections, state two types of taxes, licenses, or fees which are usually included within each of these subsections.

(b) The "all industry" type regulatory bill includes specific provisions concerning rating organizations and advisory organizations. Distinguish between these two types of organizations.

SECTION (b)

5\. (a) At the time of initiation of the Federal Old Age and Survivors Insurance Program there were already in the United States a strong and sound body of life insurance companies engaged in the selling of life insurance and life annuities. Why then was it felt necessary that the program be administered in its entirety by the Federal Government?

(b) What single factor distinguishes social insurance from private insurance? Discuss briefly.

(c) What are the requirements for the "fully insured" status and the "currently insured" status under the Social Security Act?

6\. (a) Discuss the reasonableness of employer contributions based on payrolls as a method of financing unemployment insurance.

(b) List eight disadvantages of a compulsory automobile insurance law of the Massachusetts type as a solution to the problem of the uninsured motorist.

7. Assume that a proposal has been made to introduce a new automobile liability coverage providing benefits for bodily injury or death caused by uninsured motorists. The proposal contemplates that this new coverage is to be made available only for private passenger cars insured under an automobile liability policy issued by one of the companies writing this type of coverage. In addition, it is understood that this new coverage will be afforded *only* to cars registered and garaged chiefly in New York State. State your reasons for approving of or disapproving of this proposed coverage.

8. (a) Under the California Disability Benefits Law private plans cannot be approved if they will result in a substantial selection of risks adverse to the Disability Fund. Discuss the need for such a provision in a law of the New York type.

(b) Assume that the most recent reliable morbidity study in group insurance states that the all male morbidity for 8-8-13 is .50 weeks per year.

(i) Explain the usual meaning of 8-8-13 and translate the morbidity into a pure premium.

(ii) If your state had just adopted an 8-8-13 non-occupational disability benefits law providing benefits substantially equal to its unemployment compensation law, list the additional information you would need to develop an all male percentage of payroll rate based on this morbidity study.

PART IV

MAY 15, 1956 TIME 1:30 TO 4:30 O'CLOCK

SECTION (a)

NOTE: Answer any eight of the questions numbered 1 through 12.

1. Discuss the meaning of the terms "General Average" and "Par-

ticular Average" as used in connection with ocean marine insurance and give examples of each.

2. (a) A property worth $20,000 is insured for $8,000. A fire loss of $4,000 occurs. How much can the insured recover:

   (i) If the policy contains a "three-fourths value clause?"

   (ii) If the policy contains a "three-fourths loss clause?"

   (iii) If the policy contains an 80% co-insurance clause?

   (iv) If the policy contains a two-thirds vacancy clause and the property is vacant at the time of the fire?

   (b) What would the answers be if the loss were $20,000?

3. (a) Define "insurable interest".

   (b) In fire insurance, one of the most frequent cases of two concurrent insurable interests arises from the relation created by a mortgage of real estate. State five principal methods that have been used in fire insurance to insure the mortgagee.

   (c) Which of these five principal methods affords the best protection in most states?

4. Discuss briefly the "Sue and Labor clause" which is found in all marine insurance contracts.

5. An insured has a fire policy with an extended coverage endorsement attached covering his home for $10,000. This policy was issued by Company A. He also has a fire policy without extended coverage endorsement attached for $15,000 issued by Company B and covering the same property. A loss of $2,000 occurs. How much would the insured recover and what are the terms of the contract upon which you base your reasoning, assuming:

   (a) Loss arose out of smoke damage resulting from the use of an open fireplace?

   (b) Loss arose out of damage due to a windstorm?

6. (a) Distinguish between fidelity bonds and surety bonds.

   (b) Briefly define the following terms used in suretyship:

(i) Principal
(ii) Surety
(iii) Obligee
(iv) Cosuretyship

7. (a) Distinguish between burglary and robbery.

(b) Briefly explain how the determination of the coinsurance requirement for the mercantile stock burglary form differs from the determination of the coinsurance requirement in fire insurance forms.

8. (a) Outline the procedure you would follow to obtain the premium charged for glass breakage insurance for a grocery store with an exposure of one plate glass window protected by an exterior shield of wire mesh.

(b) The Manual of glass insurance published by the National Bureau of Casualty Underwriters provides a set of rate tables for box car sizes and flat car sizes. What is meant by box car sizes and flat car sizes?

9. What is the difference between basic medical payments coverage (Division 1 of medical payments coverage) and extended medical payments coverage (Division 2 of medical payments coverage) available under the standard automobile liability policy?

10. In automobile physical damage insurance, what is the difference between the "stated amount" and the "actual value" form? Is there a difference in the insurance company's liability under these two forms? Explain.

11. The AB Corporation has engaged an independent contractor to erect a commercial office building and the independent contractor has agreed to hold the AB Corporation harmless during the period of construction.

(a) Name the third party liability insurance coverages needed by the AB Corporation and the contractor to cover the construction of the new building.

(b) State the measure of exposure normally used in determining the premium for each of these lines of coverages.

12. (a) Give four examples of each of the following which appear in the Manual of Rules, Classifications and Rates published by the National Council on Compensation Insurance:

    (i) Standard exceptions.

    (ii) General inclusions.

    (b) What are the deposit premium requirements prescribed in the Manual of Rules, Classifications and Rates published by the National Council on Compensation Insurance for policies written on an annual and on an interim premium adjustment basis?

SECTION (b)

NOTE: Answer question 13 and any seven of the questions numbered 14 through 24.

13. You are given a line of insurance in which for each unit of exposure an accident either happens or does not happen, and for which the accident frequency is .08. Describe in detail how you would determine the exposure requirement for 100% credibility if your criterion is that 99 times in 100 the observed number of accidents is within 5% of the expected number.

14. Briefly describe the Schedule for Grading Cities and Towns of the National Board of Fire Underwriters.

15. Discuss the role of rating bureaus in the fields of workmen's compensation and general fire insurance.

16. Discuss briefly what is meant by "class rates" and "schedule rates" as used in fire insurance ratemaking.

17. List some of the areas in which judgment plays an important part in the ratemaking procedures for:

    (a) Mercantile fire risks

    (b) Individual automobile liability risks

18. Compare the loss ratio method of ratemaking as used in fire insurance with the pure premium method employed in the major casualty lines.

19. In the casualty insurance field, individual risk rating plans based on individual risk experience have found wide application. Give

some of the reasons why the same is not true in the fire insurance field.

20. Discuss the differences between suretyship and most other fire and casualty insurance lines which affect ratemaking processes.

21. An accident policy issued by Company Z pays a weekly benefit of \$25 during total disability of eight days or longer. The Company has determined that out of 1,000,000 policyholders in a particular age group, 20,000 such claims were incurred with an average disability period of five weeks commencing with the first day of disability and not extending beyond the limit covered by the policy.
    (a) What is the claim frequency?
    (b) What is the annual one-year term premium?

22. In the determination of state rate levels, the National Council on Compensation Insurance makes use of a factor to correct for the off balance due to the experience rating plan. Discuss.

23. (a) Briefly state the purpose of the rate level adjustment factor in the development of workmen's compensation rates.
    (b) Name the items which the National Council on Compensation Insurance applies to or adds to the final proposed pure premiun to obtain the final manual rate for reviewed classifications.

24. Calendar-accident year statistics involve premiums earned during a calendar year on policies exposed during the year, regardless of effective dates of the policies, and losses incurred on accidents occuring during the same calendar year. Discuss the advantages and disadvantages of calendar-accident year statistics vs. policy year statistics in automobile liability ratemaking.

EXAMINATION FOR ENROLLMENT AS FELLOW

PART I

MAY 14, 1956 TIME 9:30 TO 12:30 O'CLOCK

SECTION (a)

1. In the report of the Casualty Actuarial Society's Committee on Compensation and Liability Loss and Loss Expense Reserves, the question of minimum reserves under Parts 1 and 2 of Schedule P was discussed.

   (a) What are these minimum requirements and what is their fundamental purpose?

   (b) Discuss the criticisms of minimum reserve requirements set forth in this report.

   (c) What did the committee conclude with regard to minimum reserves?

2. (a) It has been contended that the incurred but not reported reserve may be determined as a function of the reserve for known cases. Discuss this statement briefly.

   (b) In determining incurred but not reported reserves for a line of business, the current relationship to past experience of three important factors must be taken into account. What are these factors?

3. A fire insurance company writes policies on a one-year basis only. Its business is evenly distributed throughout the year with a monthly premium volume of $1,200,000.

   In 1955 the company commences the issuance of 3-year and 5-year policies for the first time. The premium for a 3-year policy is 2½ times the premium for a 1-year policy, and the premium for a 5-year policy is 4 times the premium for a 1-year policy. All premiums are payable in advance with no plan for installment payments.

   Assuming no change in the total number of policies issued, nor in the distribution of business by month of issue, what percent of the policyholders elect 3-year policies if the earned premium for 1955 is $648,000 less than the earned premium for 1954? It is known that one-half of the policyholders elect to remain on a 1-year basis.

4. Develop a criterion for distinguishing between a true liability and a surplus reserve. Apply this criterion to the following statement items and explain your decision in each instance.

   (a) Unearned premium reserve.

   (b) Excess of Schedule "P" reserve over case reserve.

   (c) Reserve for contingent commissions.

   (d) Voluntary occupational disease reserve for workmen's compensation claims.

   (e) Reserve for undeclared dividends.

SECTION (b)

5. The following data have been taken from the records of Company A. All items except assets and liabilities are within Calendar Year 1954. Assets and liabilities are as of December 31, 1954 unless otherwise noted. Items 1 through 8 are net as to reinsurance.

(1)	Premiums earned	6,300,000
(2)	Unearned premiums	5,100,000
(3)	Losses incurred	2,700,000
(4)	Unpaid losses	4,600,000
(5)	Loss adjustment expenses incurred	500,000
(6)	Unpaid loss adjustment expenses	575,000
(7)	Other underwriting expenses incurred	2,800,000
(8)	Other unpaid expenses	50,000
(9)	Federal income taxes incurred	200,000
(10)	Unpaid taxes, licenses and fees (incl. federal income taxes)	400,000
(11)	Cash dividend paid	250,000
(12)	Excess of liability and compensation statutory and voluntary reserves over case basis and loss expense reserves	30,000
(13)	Increase in excess of liability and compensation statutory and voluntary reserves over case basis and loss expense reserves	30,000
(14)	Net investment income earned	375,000
(15)	Net realized capital losses	50,000

(16)	Net unrealized capital gains	725,000
(17)	Agents balances or uncollected premiums	675,000
(18)	Ceded reinsurance balances payable	25,000
(19)	Net gain from agents' balances charged off	6,000
(20)	Net gain from decrease in non-admitted assets	9,000
(21)	Bonds	11,000,000
(22)	Stocks	4,000,000
(23)	Reinsurance recoverable on loss payments	50,000
(24)	Cash and Bank deposits	900,000
(25)	Interest dividends and real estate income due and accrued	40,000
(26)	Contingency reserve	100,000
(27)	Capital paid up	1,500,000
(28)	Surplus as regards policyholders 12-31-53	5,000,000

Prepare the Statement of Income and Capital and Surplus Account of the underwriting and investment exhibit of the annual statement of Company A for the year ended December 31, 1954. In order to conserve time, use the numbers of the items above rather than their descriptions.

6. Using the data of question 5 prepare the following parts of the annual statement.

   (a) Page 2 captioned "Assets"

   (b) Page 3 captioned "Liabilities, Surplus and Other Funds"

7. (a) Part I of the insurance expense exhibit provides for the allocation of expenses to five major expense groups within twenty-one operating expense classifications.

   (i) Name the five major expense groups

   (ii) Give ten of the operating classifications

   (iii) With what part of the annual statement does the insurance expense exhibit reconcile?

   (b) Part II of the insurance expense exhibit provides for the allocation of expenses to lines of business. On the basis of the uniform accounting instruction, how would you allocate the following expense items:

(i) Allocated loss adjustment expense

(ii) Rent

(iii) Traveling and entertaining

(iv) Advertising

(v) Salaries

Elaborate upon the allocation of salaries, giving three permissible bases for allocation.

8. In making a study to determine expenses by size of risk, indicate how you would handle each of the following items:
   a. Commissions
   b. Claim investigation and adjustment
   c. Investment expenses
   d. Inspection
   e. Telephone and telegraph

PART II

MAY 14, 1956 — TIME 1:30 TO 4:30 O'CLOCK

SECTION (a)

NOTE: Answer any four of the questions numbered 1 through 6.

1. Discuss the relative advantages of experience rating and schedule rating. Tell why experience rating is used more frequently in casualty insurance, whereas schedule rating is found more often in fire insurance. Illustrate your answer by referring to either

   Experience rating in workmen's compensation insurance

   or

   Schedule rating in fire insurance.

2. (a) Explain the difference between deductible and excess coverage.

   (b) Given the following data, determine the discount for a $100 deductible. Assume no safety factor and carry answer to three places of decimals.

(i) Expected loss factor (including allocated claim expense) .... .55

(ii) Allowance in rate for other items —
Unallocated claim expense, administration and inspection 15%
Acquisition, taxes and profit 30%

(iii) Allocated claim expense is 25% of losses.

(iv)

	Number	Amount
Losses under $100 per claim	4,000	$200,000
Total losses (including those under $100)	5,000	$800,000

3. Explain in detail the jeweler's block experience rating plan of the Inland Marine Insurance Bureau. Include in your discussion specific description of the following items:
   (a) Normal experience period.
   (b) Maximum loss ratio for eligibility.
   (c) The rating formula.
   (d) Maximum and minimum credibilities and premium values for same.
   (e) Maximum inventory value to which plan is applicable.

4. For a risk having operations in New York State only that qualifies for rating under the New York Automobile Experience Rating Plan:
   (a) Explain how the premium subject to experience rating is determined for basic limits and increased limits.
   (b) Briefly describe how the increased limits experience modification is determined.
   (c) State the general formula for calculating the maximum single loss and mention why there is more than one maximum single loss for a given premium size.

5. Although the Universal Mercantile System and Analytic System of determining fire insurance rates have the same purpose, they have important differences. By comparing the two systems, explain these differences.

6. Developing a "Table M" on the basis of the loss distribution listed below for 200 risks having expected losses of $4,625, determine the entry ratios, charges and savings for;

(a) Maximum rated losses of \$6,000 and \$7,000

(b) Minimum rated losses of \$2,000 and \$3,000

	Number of Risks (Frequency)	Incurred Loss Size	Incurred Losses
	10	1,000	10,000
	15	2,000	30,000
	25	3,000	75,000
	45	4,000	180,000
	40	5,000	200,000
	35	6,000	210,000
	20	7,000	140,000
	10	8,000	80,000
Total	200		925,000

SECTION (b)

NOTE: Answer any four of the questions numbered 7 through 12.

7. In fire re-insurance explain the meaning of each of the following types of treaties:

   (a) Quota — share

   (b) Surplus

   (c) Excess of loss

   Discuss the use of each type, including in your answer:

   (i) Circumstances under which treaty would be used

   (ii) An example of a loss settlement

   (iii) Probable ceding commission arrangement

8. In the past year there have been at least three instances where the authority or the effectiveness of state regulation of insurance has been open to challenge. Identify and briefly describe *each* of the following and discuss any *one* of the three situations in detail.

(a) A situation where a federal agency has cited certain insurance companies for alleged malpractice.

(b) Another federal agency reserved the right to make its own examination of insurance companies.

(c) A series of insurance company failures, where there appeared to be an inter-relationship among the companies, and where one insurance commissioner refused to permit a zone examination of one such company domiciled in his state.

9. The president of your company has given you the choice of analyzing any *one* of these three ideas and writing a report thereon. Indicate how you would approach the problem, what your pre-conceptions are, what additional facts you might need, and the feasibility of the idea's adoption.

(a) Writing automobile bodily injury liability insurance on a deductible basis and with additional participation by the insured over a specified limit per claim.

(b) For Workmen's Compensation and Group Disability insurance risks, providing a schedule credit or debit based on rate of employee turnover.

(c) Accepting mail-in audits in place of using insurance company payroll auditors for Workmen's Compensation insurance — (distinguish throughout between small and large risks).

10. (a) Explain the difference between Safety Responsibility Laws and Financial Responsibility Laws.

(b) What provisions in automobile assigned risk plans encourage the assigned motorist to continue to seek voluntary insurance rather than remain under the plan?

(c) What might happen to the car of a citizen of the United States who became involved in an automobile accident in the Provinces of Manitoba, Alberta, or British Columbia if the property damage is $200?

11. (a) It has been stated that the characteristics of the investment portfolio of a fire or casualty insurance company should be stability, income, and integrity of principal. Indicate your feelings as to the order of importance of these three items, including your reasons.

    (b) What types of investment are available to fire and casualty insurance companies? How would you go about developing an investment policy for selection among these various types? What relationship, if any, would your policy have to the distribution of liabilities and surplus in the company's balance sheet.

    (c) Demonstrate your familiarity with this topic by discussing two different methods used in valuing securities. Do not use the same type of security in both discussions.

12. As companies have begun to exercise multiple line underwriting powers, they have been confronted with certain problems that had not been entirely unforseen. Briefly discuss four of these problems.

PART III

MAY 15, 1956 TIME 9:30 TO 12:30 O'CLOCK

SECTION (a)

1. Most multiple line carriers presently use the eighty column punch cards in recording both accounting and experience (ratemaking) data. The various columns are grouped into "fields", many of which are common to almost all lines of business, while others serve a specific purpose for individual lines.

    (a) Give an example and explain the purpose of a "field" representative of each of the following general categories found on premium and exposure cards:

        (i) Reference field

        (ii) Accounting field

        (iii) Statistical (i.e. Ratemaking Experience)

(b) In addition to (a) above, name and explain briefly the purpose of nine other "fields" which would commonly be found on the premium and exposure card of a multiple line agency type company, regardless of the line of business recorded.

2. Describe the various techniques and devices which can be utilized to assure the accuracy of the operation when using each of the following machines:

(a) Sorter

(b) Key-punch

(c) Calculating punch

(d) Reproducer

(e) Gang punch

(f) Tabulator with Summary Punch

(g) Collator

3. The entire insurance industry is today studying the capabilities of high speed digital computers known as "electronic computers". Typical of these machines are the "Univac" by Remington Rand, and the "705" by International Business Machines, as well as others. Describe briefly the five basic parts of this type machine.

4. (a) Compare the flexibility of a large scale electronic computer for handling a complex report planned to be run regularly with its flexibility for handling a special request from the Production Department for information of a type not anticipated in the original plans.

(b) Ideally, where should an "electronics committee" fit into a company's organizational pattern and lines of authority? Why?

SECTION (b)

NOTE: Answer any four of the questions numbered 5 through 10.

5. Members and subscribers of the National Bureau of Casualty Underwriters report their statistical data under prescribed plans for Automobile Bodily Injury and Property Damage, and for

Other Liability Bodily Injury and Property Damage. Give a resume of the instructions for reporting the following information under these plans:

(a) Automobile Bodily Injury and Property Damage

(i) Number of Claims

(ii) Six-months Policies

(iii) Premiums

(b) Liability Bodily Injury and Property Damage

(i) Date of Valuation of Experience

(ii) Deductible and Excess Insurance

(iii) Three-Year Policies

6. The National Bureau of Casualty Underwriters' statistical plans for both Glass and Burglary insurance provide two acceptable methods for the handling of statistical entries of premiums for changes in policies by endorsement, where changes in classification or territory are involved.

   (a) Describe these two methods.

   (b) Describe a third possibility. Why is this method considered unsatisfactory?

7. (a) Outline the five Fire Classification Subdivisions contained in the Standard Classification of Occupancy Hazards adopted by the National Board of Fire Underwriters.

   (b) With respect to the Automobile Statistical Plan of the National Automobile Underwriters Association, name three circumstances which would require more than one premium and exposure punch card to report a single policy.

8. The following are with reference to the Statistical Plan for Earned Premiums and Incurred Losses adopted by the National Board of Fire Underwriters.

(a) For what types of coverage will Earned and Incurred data be developed, and in what detail as respects breakdown by classification?

(b) On what basis do the companies report, and how can the data be converted to an Earned/Incurred basis?

(c) Under the present rules, could Policy Year Incurred/Earned data be developed? Explain.

9. To which of the well-known publications of insurance statistics would you refer to obtain the following types of information:

(a) Casualty and Surety — Summary of countrywide premiums earned and loss and loss expense incurred, by line of business, for the great majority of all Stock Companies combined.

(b) Fire — Same summary as (a) above.

(c) Fire and Casualty and Surety — Combined Loss and Expense Ratios, and Underwriting Profit, by Company, by line of business.

(d) Fire and Casualty and Surety — Classification (i.e. distribution) of Business for each group of affiliated companies.

(e) Exhibit of Workmen's Compensation Incurred to Earned Loss Ratios by state, separately for Non-Participating Stock Companies, Participating Stock Companies, Mutuals, etc.

(f) Incurred to Earned Loss Ratios by company for the various types of Accident and Health Insurance.

(g) Fire and Casualty and Surety — A breakdown of Underwriting Expenses Paid (such as Postage, Salaries, Rent, Advertising) expressed as percents of premium, separately by company, for all lines combined.

(h) Premiums Written and Losses Paid by state, by company, by line of business.

10. Suppose that you had just been appointed as statistician of a large Fire or Casualty Company (select either one), operating country-

wide through large branch offices or large agencies. Suppose further, that your predecessor had confined his internal statistics (other than annual statement) to an annual summary of earned premium and incurred losses, all lines combined, separately for each branch or office. Name the further types of internal statistics you would start compiling, in order to assist your underwriting, claim, and production executives, and explain the purpose of each type of data.

PART IV

MAY 15, 1956 TIME 1:30 TO 4:30 O'CLOCK

SECTION (a)

NOTE: Answer any four of the questions numbered 1 through 6.

1. Discuss the problems which confront the fire actuary in attempting to use the loss ratio statistics as presently collected by the National Board of Fire Underwriters for ratemaking purposes.

2. The following are with respect to the standard ratemaking procedure of the National Council on Compensation Insurance:

   (a) Given a "proposed pure premium" for a reviewed classification, describe and explain the steps necessary to convert to a manual rate.

   (b) Explain the recent change (December, 1954) made with respect to the computation of the Rate Level Adjustment Factor, and its effect on the rate level.

3. (a) Discuss the relative merits of using short term experience, long term experience, and a combination of long and short term experience in surety ratemaking.

   (b) Discuss the need for, and relative size of, an allowance for "profit and contingency" in surety rates as compared to the casualty lines.

4. It is sometimes suggested that the interest earned on unearned premium reserves should be taken into account in the determination of casualty insurance rates.

(a) Discuss the equity of an interest factor so based when considering both the policyholders and the stockholders of the company.

(b) Describe and discuss another basis on which the interest accruing to policyholders might be determined.

5. It has been suggested from time to time that automobile insurance be based on "insuring the driver rather than the motor vehicle". Discuss the problems involved in promulgating rates under such a plan.

6. (a) Discuss the merits of collecting Extended Coverage experience separately by Building and by Contents, to justify rate differentials between the two coverages.

(b) Fire Insurance rates are generally based on a flat expense loading. Discuss the feasibility of departing from this procedure by graduating expenses according to:

(i) Size of Policy

(ii) Classification

(iii) Territory

SECTION (b)

7. Write an essay on any one of the following topics:

(1) Private carriers and insurance against flood losses.

(2) Replacement Cost Insurance in the field of dwelling fire contracts.

(3) Comparison of the various plans now in use to meet the problem of "The Uninsured Motorist".

(4) The question of Federal Trade Commission jurisdiction over insurance company advertising in the state of New York.

(5) Optional vs. mandatory deductible on extended coverage. Include discussion on higher deductible amount.

INDEX TO VOLUME XLIII

INDEX TO VOLUME XLIII (Con.)

CASUALTY ACTUARIAL SOCIETY

ORGANIZED 1914

1957 YEAR BOOK

(Addendum to Volume XLIII of the *Proceedings*)

Corrected to February 1, 1957 No. 35

FOREWORD

The Casualty Actuarial Society was organized November 7, 1914 as the Casualty Actuarial and Statistical Society of America, with 97 charter members of the grade of Fellow. The present title was adopted on May 14, 1921. The object of the Society is the promotion of actuarial and statistical science as applied to the problems of casualty and social insurance by means of personal intercourse, the presentation and discussion of appropriate papers, the collection of a library and such other means as may be found desirable. The organization of the Society was brought about through the suggestion of Dr. I. M. Rubinow, who became the first president. The problems surrounding workmen's compensation were at that time the most urgent, and consequently many of the members played a leading part in the development of the scientific basis upon which workmen's compensation insurance now rests.

The members of the Society have also presented original papers to the *Proceedings* upon the scientific formulation of standards for the computation of both rates and reserves in accident and health insurance, liability, burglary, and the various automobile coverages. The presidential addresses constitute a valuable record of the current problems facing the casualty insurance business. Other papers in the *Proceedings* deal with acquisition costs, pension funds, legal decisions, investments, claims, reinsurance, accounting, statutory requirements, loss reserves, statistics, and the examination of casualty companies. "The Recommendations for Study" appear in *Proceedings* Vol. XLI and are in effect for the 1955 examinations and thereafter. The Report of the Committee on Mortality for Disabled Lives together with commutation tables and life annuities has been printed in *Proceedings* No. 62. The Committee on Compensation and Liability Loss and Loss Expense Reserves submitted a report which appears in Volume XXXV.

At the November 1950 meeting of the Society the Constitution and By-Laws were amended to enlarge the scope of the Society to include all lines of insurance other than life insurance. The effect of the amendment was to include fire insurance and allied lines in recognition of multiple line writing powers granted by many states to both casualty companies and fire companies.

The lower grade of membership in the Society is that of Associate. Examinations have been held every year since organization; they are held during the second or third week of the month of May, in various cities in the United States and Canada. The membership of the Society consists of actuaries, statisticians, and executives who are connected with the principal casualty companies and organizations in the United States and Canada. The Society has a total membership of 329 consisting of 181 Fellows and 148 Associates.

The Society issues a publication entitled the *Proceedings* which contains original papers presented at the meetings. The *Proceedings* also contain discussions of papers, and reviews of books. This Year Book is published annually. "Recommendations for Study" is a pamphlet which outlines the course of study to be followed in connection with the examinations for admission. These two booklets may be obtained free upon application to the Secretary-Treasurer Albert Z. Skelding, 200 Fourth Avenue, New York 3, N. Y.

CASUALTY ACTUARIAL SOCIETY

NOVEMBER 16, 1956

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Committee on Social Insurance

Harold J. Ginsburgh (Chairman)

Ralph H. Blanchard — Clarence A. Kulp
Jarvis Farley — W. Rulon Williamson
A. L. Kirkpatrick — Hubert W. Yount

Committee on Loss and Loss Expense Reserves

Joseph Linder (Chairman)

Harmon T. Barber — Arthur S. Kuenkler
John W. Carleton — John A. Mills
E. Shaw Skillings

Research Committee

Harold E. Curry (Chairman)

John R. Bevan — M. Stanley Hughey
F. Stuart Brown — Robert L. Hurley
Frederick W. Doremus — George C. Munterich
Robert B. Foster — D. R. Uhthoff

Special Committee on Membership

James M. Cahill (Chairman)

Harmon T. Barber — John A. Mills
Thomas O. Carlson — Francis S. Perryman
Harold J. Ginsburgh — Dudley M. Pruitt

Special Committee on Mortality of Disabled Lives

Arthur N. Matthews (Chairman)

Edward S. Allen — Ralph M. Marshall
John R. Bevan — Albert Z. Skelding
Frank Harwayne — Nels M. Valerius

MEMBERSHIP OF THE SOCIETY, NOVEMBER 16, 1956

FELLOWS

Those marked (†) were Charter Members at date of organization, November 7, 1914

Admitted	
Nov. 21, 1930	AINLEY, JOHN W., Supervising Underwriter, The Travelers Insurance Company, 700 Main Street, Hartford 15, Conn.
Nov. 14, 1947	ALLEN, EDWARD S., Assistant General Manager and Actuary, New York Compensation Insurance Rating Board, 100 E. 42nd Street, New York 17, N. Y.
Nov. 13, 1931	AULT, GILBERT E., Actuary, Church Pension Fund and Church Life Insurance Corporation, 20 Exchange Place, New York 5, N. Y.
Nov. 18, 1955	BAILEY, ROBERT A., Hardware Mutual Casualty Company, 200 Strongs Avenue, Stevens Point, Wis.
Nov. 20, 1924	BARBER, HARMON T., Second Vice President and Actuary, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 19, 1954	BARKER, GORDON M., Associate Group Actuary, Nationwide Mutual Insurance Co., Columbus 16, Ohio.
Nov. 14, 1947	BARKER, LORING M., Actuary, Fireman's Fund Insurance Group, 401 California Street, San Francisco 20, Calif.
Nov. 20, 1942	BART, ROBERT D., Comptroller and Assistant Treasurer, West Bend Aluminum Co., 92 Island Avenue, West Bend, Wis.
Nov. 18, 1932	BARTER, JOHN L., Vice-President, Hartford Accident & Indemnity Co., 690 Asylum Avenue, Hartford 15, Conn.
Nov. 13, 1931	BATHO, ELGIN R., Assistant Vice President and Actuary, Berkshire Life Insurance Co., 7 North Street, Pittsfield, Mass.
Nov. 16, 1956	BENNETT, NORMAN J., Fire and Casualty Actuary, Florida Insurance Department, Tallahassee, Florida.
Nov. 22, 1934	BERKELEY, ERNEST T., Actuary, Employers' Liability Assurance Corporation, Ltd., American Employers' Insurance Company and Employers' Fire Insurance Company, 110 Milk Street, Boston 7, Mass.
Nov. 19, 1953	BEVAN, JOHN R., Assistant Actuary, Liberty Mutual Insurance Company, 175 Berkeley Street, Boston 17, Mass.
†	BLACK, S. BRUCE, Chairman, Liberty Mutual Insurance Co., 175 Berkeley Street, Boston 17, Mass.
Apr. 20, 1917	BLANCHARD, RALPH H., Professor of Insurance, Graduate School of Business, Columbia University, New York 27, N. Y.
Nov. 16, 1956	BONDY, MARTIN, Associate Actuary, New York Insurance Department, 61 Broadway, New York 6, N. Y.
Nov. 16, 1956	BOYAJIAN, JOHN H., Actuary, California Inspection Rating Bureau, 500 Sansome Street, San Francisco 11, Calif.
†	BREIBY, WILLIAM, Vice-President, Pacific Mutual Life Insurance Company, 523 West 6th St., Los Angeles 14, Calif.
Nov. 21, 1952	BRINDISE, RALPH S., Casualty Actuary, Standard Oil Company (Indiana) 910 So. Michigan Ave., Chicago 80, Ill.

FELLOWS

Admitted	
Nov. 18, 1927	BROWN, F. STUART, Electronics Committee, American Insurance Group, 15 Washington Street, Newark 2, N. J.
Oct. 22, 1915	BROWN, HERBERT D., (Retired), Glenora-on-Lake Seneca, Dundee, New York.
†	BUCK, GEORGE B., Consulting Actuary, 150 Nassau Street, New York 38, N. Y.
Apr. 20, 1917	BURHOP, WILLIAM H., President, Employers Mutual Liability Insurance Company, 407 Grant Street, Wausau, Wis.
Nov. 23, 1928	BURLING, WILLIAM H., Secretary, Group Department, The Travelers Insurance Company, 700 Main Street, Hartford 15, Conn.
Nov. 19, 1929	CAHILL, JAMES M., Secretary, National Bureau of Casualty Underwriters, 60 John Street, New York 38, N. Y.
Nov. 18, 1932	CAMERON, FREELAND R., Vice President and Actuary, American-Equity Insurance Group, P.O. Box 3131, Miami, Florida.
†	CAMMACK, EDMUND E., Vice-President and Actuary, Aetna Life Insurance Company, Hartford 15, Conn.
Nov. 17, 1938	CARLETON, JOHN W., Vice President and Actuary, Liberty Mutual Insurance Company, 175 Berkeley Street, Boston 17, Mass.
Nov. 21, 1930	CARLSON, THOMAS O., Actuary, National Bureau of Casualty Underwriters, 60 John Street, New York 38, N. Y.
Nov. 18, 1949	CLARKE, JOHN W., Vice President, Gulf Life Insurance Co., Jacksonville 1, Florida.
Nov. 15, 1918	COATES, BARRETT N., 1007 Cragmont Avenue, Berkeley 8, Calif.
Nov. 17, 1922	COATES, CLARENCE S., Second Vice-President, Lumbermens Mutual Casualty Company, 4750 Sheridan Road, Chicago 40, Ill.
Oct. 27, 1916	COGSWELL, EDMUND S., Consulting Actuary, 18 Cedar St., Wenham, Mass.
Feb. 19, 1915	COLLINS, HENRY, (Retired), Box 250, Windermere, Florida.
Nov. 22, 1934	CONSTABLE, WILLIAM J., 45 Pondfield Road, West, Bronxville 8, N. Y.
Nov. 22, 1934	COOK, EDWIN A., General Manager and Secretary, Interboro Mutual Indemnity Insurance Company, 270 Madison Avenue, New York 16, N. Y.
Nov. 18, 1925	CORCORAN, WILLIAM M., Partner, Wolfe, Corcoran & Linder, 116 John Street, New York 38, N. Y.
Nov. 19, 1926	CRANE, HOWARD G., Vice-President and Treasurer, General Reinsurance Corporation, and North Star Reinsurance Corporation, 90 John Street, New York 38, N. Y.
Nov. 21, 1952	CRITCHLEY, DOUGLAS, E. B. Savory & Co., London, England.
Nov. 22, 1946	CROUSE, CHARLES W., Consulting Actuary, C. E. Preslan & Co., Inc., 20015 Detroit Road, Cleveland 16, Ohio.
Nov. 19, 1953	CURRY, HAROLD E., Vice President, State Farm Automobile Insurance Co., Bloomington, Ill.
Nov. 18, 1932	DAVIES, E. ALFRED, (Retired), Falls Village, Conn.

FELLOWS

Admitted	
Nov. 18, 1927	DAVIS, EVELYN M., Woodward, Ryan, Sharp & Davis, Consulting Actuaries, 55 Broadway, New York 6, N. Y.
May 25, 1956	DAY, ELDEN W., Resident Secretary, Lumbermens Mutual Casualty Co., 342 Madison Avenue, New York 17, N. Y.
Nov. 16, 1951	DOREMUS, FREDERICK W., Manager, Eastern Underwriters Association, 85 John St., New York 38, N. Y.
Nov. 17, 1920	DORWEILER, PAUL, Actuary, Aetna Casualty & Surety Company, Hartford 15, Conn.
Nov. 24, 1933	EDWARDS, JOHN, Actuary, Ontario Department of Insurance, 1st floor, 145 Queen Street West, Toronto 1, Ontario, Canada.
Nov. 15, 1940	ELLIOTT, GEORGE B., General Manager, Pennsylvania Compensation Rating Bureau, 315 Chestnut Street, Philadelphia 6, Pa.
Nov. 17, 1922	ELSTON, JAMES S., (Retired) 1640 Palmer Avenue, Winter Park, Fla.
Nov. 15, 1935	EPPINK, WALTER T., Treasurer and Actuary, Merchants Mutual Casualty Co., 268 Main Street, Buffalo 5, N. Y.
Nov. 18, 1955	FAIRBANKS, ALFRED V., Assistant Actuary, Monarch Life Insurance Co., 365 State Street, Springfield 1, Mass.
†	FALLOW, EVERETT S., (Retired), 28 Sunset Terrace, West Hartford, Conn.
Nov. 15, 1940	FARLEY, JARVIS, Secretary-Treasurer and Actuary, Massachusetts Indemnity Insurance Co., 654 Beacon Street, Boston 15, Mass.
†	FARRER, HENRY, (Retired), 1352 Overlea Street, Clearwater, Fla.
May 25, 1956	FINNEGAN, J. H., Manager, Actuarial Bureau, National Board of Fire Underwriters, 85 John Street, New York 38, N. Y.
Nov. 15, 1935	FITZHUGH, GILBERT W., Second Vice-President, Metropolitan Life Insurance Co., 1 Madison Avenue, New York 10, N. Y.
Feb. 19, 1915	FONDILLER, RICHARD, Consulting Actuary, Woodward and Fondiller, 200 W. 57th Street, New York 19, N. Y.
Nov. 18, 1955	FOSTER, ROBERT B., Assistant Actuary; Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 18, 1955	FOWLER, THOMAS W., Actuary, Northwestern National Insurance Co. 526 East Wisconsin Avenue, Milwaukee 1, Wis.
Nov. 18, 1927	FREDERICKSON, CARL H., Actuary, Canadian Underwriters Association, 12 Upjohn Road, Don Mills, Ontario, Canada.
Nov. 22, 1934	FULLER, GARDNER V., Resident Secretary, Lumbermens Mutual Casualty Co., and American Motorists Insurance Co., 4750 Sheridan Road, Chicago 40, Ill.
Nov. 19, 1948	GARDINER, JAMES B., Assistant Actuary, Metropolitan Life Insurance Co., 1 Madison Avenue, New York 10, N. Y.
Nov. 20, 1924	GINSBURGH, HAROLD J., Senior Vice-President, American Mutual Liability Insurance Company, Vice-President, American Policyholders' Insurance Company and Allied American Mutual Fire Insurance Company, 142 Berkeley Street, Boston 17, Mass.

FELLOWS

Admitted	
Nov. 21, 1930	GLENN, J. BRYAN, 5214 First Street, N.W., Washington 11, D.C.
Nov. 13, 1931	GODDARD, RUSSELL P., Assistant to the President, Pennsylvania Manufacturers Association Casualty Insurance Co., Finance Building, Philadelphia, Pa.
†	GOODWIN, EDWARD S., (Investment Counselor, Retired) 96 Garvan Street, East Hartford 8, Conn.
Nov. 19, 1926	GRAHAM, CHARLES M., Chief Self-Insurance Examiner, New York State Workmen's Compensation Board, 55 Franklin Street, New York 13, N. Y.
†	GRAHAM, WILLIAM J., Consultant, 1070 Park Ave., New York 18, N Y.
Nov. 19, 1953	GRAVES, CLYDE H., Actuary, Mutual Insurance Rating Bureau and Mutual Insurance Advisory Association, 111 Fourth Ave. New York 3, N. Y.
†	GREENE, WINFIELD W., President, W. W. Greene Inc., Reinsurance Intermediaries and Actuarial Consultants, 110 Fulton Street, New York 38, N. Y.
Nov. 19, 1953	HALEY, JAMES B., JR., Actuary, Argonaut Insurance Group, 210 Sansome Street, San Francisco, Calif.
†	HAMMOND, H. PIERSON, (Retired), 22 Vanderbilt Road, West Hartford 7, Conn.
Nov. 16, 1956	HART, W. VAN BUREN, JR., Analyst-Programmer, Aetna Insurance Group, 670 Main Street, Hartford 15, Conn.
Nov. 17, 1950	HARWAYNE, FRANK, Chief Actuary, New York State Insurance Department, 61 Broadway, New York 6, N. Y.
Oct. 22, 1915	HATCH, LEONARD W., (Retired), 425 Pelham Manor Road, Pelham Manor, New York.
Nov. 19, 1926	HAUGH, CHARLES J., Vice President, The Travelers Insurance Co., and The Travelers Indemnity Company, Hartford 15, Conn.
Nov. 17, 1950	HAZAM, WILLIAM J., Associate Actuary, American Mutual Liability Insurance Co., 142 Berkeley Street, Boston 16, Mass.
Nov. 16, 1951	HEWITT, CHARLES C., Assistant Vice President, New Jersey Manufacturers Casualty Insurance Co., 363 West State Street, Trenton 8, N. J.
Nov. 22, 1934	HOOKER, RUSSELL O., Consulting Actuary, and President and Actuary, Insurance City Life Co., 750 Main Street, Hartford 3, Conn.
Nov. 17, 1950	HOPE, FRANCIS J., Assistant Actuary, Hartford Accident and Indemnity Co., 690 Asylum Avenue, Hartford 15, Conn.
Nov. 18, 1932	HUEBNER, SOLOMON STEPHEN, Chairman of Board, The American Institute for Property and Liability Underwriters, 3924 Walnut St., Philadelphia 4, Pa., also President Emeritus of The American College of Life Underwriters, Emeritus Professor of Insurance, University of Pennsylvania.
Nov. 14, 1947	HUGHEY, M. STANLEY, Second Vice-President, Lumbermens Mutual Casualty Company, 4750 Sheridan Road, Chicago 40, Ill.
†	HUNTER, ARTHUR, (Retired), 124 Lloyd Road, Montclair, N. J.
Nov. 18, 1955	HURLEY, ROBERT L., Actuary, Liberty Mutual Fire Insurance Co., 175 Berkeley Street, Boston 17, Mass.

FELLOWS

Admitted	
Feb. 25, 1916	JACKSON, CHARLES W., (Retired), 74 Quimby Avenue, White Plains, N. Y.
Nov. 19, 1954	JOHE, RICHARD L., Assistant Actuary, United States Fidelity and Guaranty Company, Baltimore, Md.
Nov. 14, 1941	JOHNSON, ROGER A., Actuary, Utica Mutual Insurance Co., P. O. Box 530, Utica, N. Y.
Nov. 16, 1939	JONES, HAROLD M., Group Research Division, John Hancock Mutual Life Insurance Company, 200 Berkeley Street, Boston 17, Mass.
Nov. 16, 1956	KALLOP, ROY H., Assistant Actuary, National Council on Compensation Insurance, 200 Fourth Avenue, New York 3, N. Y.
Nov. 19, 1926	KELTON, WILLIAM H., Associate Actuary, Life Actuarial Department, The Travelers Insurance Co., 700 Main Street, Hartford 15, Conn.
Nov. 21, 1919	KIRKPATRICK, A. LOOMIS, Manager Insurance Department, Chamber of Commerce of the U. S. A., 1615 H Street, N.W., Washington 6, D.C.
Nov. 14, 1941	KOLE, MORRIS B., Principal Actuary, State Insurance Fund, 199 Church Street, New York 7, N. Y.
Nov. 24, 1933	KORMES, MARK, Consulting Actuary, 285 Madison Avenue, New York 17, N. Y.
Nov. 19, 1953	KUENKLER, ARTHUR S., Vice-President, United States Fidelity & Guaranty Co., Baltimore, Md.
Nov. 23, 1928	KULP, CLARENCE A., Professor of Insurance and Dean, Wharton School, University of Pennsylvania, Dietrich Hall, 37th and Locust Streets, Philadelphia 4, Pa.
Nov. 18, 1949	LA CROIX, HAROLD F., Associate Actuary, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 13, 1931	LA MONT, STEWART M., (Retired), Hotel Claremont, Berkeley, Calif.
Nov. 24, 1933	LANGE, JOHN R., 1627 Madison Street, Madison 5, Wis.
†	LEAL, JAMES R., (Retired).
†	LESLIE, WILLIAM, General Manager, National Bureau of Casualty Underwriters, 60 John Street, New York 7, N. Y.
Nov. 17, 1950	LESLIE, WILLIAM, JR., General Manager, National Council on Compensation Insurance, 200 Fourth Ave., New York 3, N. Y.
Nov. 20, 1924	LINDER, JOSEPH, Consulting Actuary, Wolfe, Corcoran & Linder, 116 John Street, New York 38, N. Y.
Nov. 16, 1956	LINO, RICHARD, Actuarial Department, National Bureau of Casualty Underwriters, 60 John Street, New York 7, N. Y.
Nov. 18, 1955	LISCORD, PAUL S., JR., Assistant Actuary; Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 17, 1950	LIVINGSTON, GILBERT R., Assistant Actuary, National Bureau of Casualty Underwriters, 60 John Street, New York 7, N. Y.
Nov. 16, 1951	LONGLEY-COOK, LAURENCE H., Actuary, Insurance Company of North America, 1600 Arch Street, Philadelphia 1, Pa.
Nov. 13, 1936	LYONS, DANIEL J., Administrative Vice-President, The Guardian Life Insurance Co. of America, 50 Union Square, New York 3, N. Y.

FELLOWS

Admitted	
Nov. 19, 1954	MACKEEN, HAROLD E., Assistant Actuary; Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 23, 1928	MARSHALL, RALPH M., Assistant Actuary, National Council on Compensation Insurance, 200 Fourth Ave., New York 3, N. Y.
Nov. 18, 1927	MASTERSON, NORTON E., Vice-President and Actuary, Hardware Mutual Casualty Co. and Hardware Dealers Mutual Fire Insurance Co., 200 Strongs Avenue, Stevens Point, Wis.
Nov. 19, 1926	MATTHEWS, ARTHUR N., Actuary; Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
May 19, 1915	MAYCRINK, EMMA C., Secretary-Treasurer, Association of New York State Mutual Casualty Companies, 60 East 42nd Street, New York 17, N. Y.
Nov. 15, 1935	MCCONNELL, MATTHEW H., Superintendent, Compensation and Liability Department, General Accident Fire and Life Assurance Company, Fourth and Walnut Sts., Philadelphia 5, Pa.
Oct. 31, 1917	MCMANUS, ROBERT J., Assistant Actuary; Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 18, 1955	MENZEL, HENRY W., Actuary, Springfield Insurance Companies, 1250 State Street, Springfield, Mass.
†	MICHELBACHER, G. F., President, Great American Indemnity Co., 1 Liberty Street, New York 5, N. Y.
Nov. 17, 1938	MILLER, JOHN HAYNES, Vice-President and Actuary, Monarch Life Insurance Company, 365 State St., Springfield 1, Mass.
†	MILLIGAN, SAMUEL, Senior Vice-President, Metropolitan Life Insurance Co., 1 Madison Avenue, New York 10, N. Y.
Nov. 18, 1937	MILLS, JOHN A., Vice-President and Actuary, Lumbermens Mutual Casualty Co., American Manufacturers Mutual Insurance Company and American Motorists Insurance Co., Mutual Insurance Bldg., 4750 Sheridan Road, Chicago 40, Ill.
Nov. 18, 1921	MONTGOMERY, VICTOR, President, Pacific Employers Insurance Co., 1033 So. Hope Street, Los Angeles 15, Calif.
†	MOORE, GEORGE D., Actuary, 13 Emerson Street, E. Orange, N. J.
Nov. 17, 1920	MUELLER, LOUIS H., 2845 Lake Street, San Francisco 21, Calif.
Nov. 16, 1956	MUETTERTIES, JOHN H., Casualty Actuary, Industrial Indemnity Company, 155 Sansome Street, San Francisco 4, Calif.
Nov. 17, 1950	MUNTERICH, GEORGE C., Statistician, Hartford Accident and Indemnity Co., 690 Asylum Ave., Hartford 15, Conn.
May 28, 1920	MURPHY, RAY D., Chairman of the Board, Equitable Life Assurance Society of the U.S., 393 Seventh Avenue, New York 1, N. Y.
Nov. 19, 1954	MURRIN, THOMAS E., Assistant Actuary, National Bureau of Casualty Underwriters, 60 John Street, New York 7, N. Y.
Nov. 15, 1935	OBERHAUS, THOMAS M., Consulting Actuary, Woodward and Fondiller, 200 West 57th Street, New York 19, N. Y.
†	OLIFIERS, EDWARD, Consulting Actuary, Caixa Postal 8, Petropolis, Rio, Brazil.

FELLOWS

Admitted	
†	ORR, ROBERT K., (Retired), 316 E. Lenawee Street, Lansing, Mich.
Nov. 21, 1919	OUTWATER, OLIVE E., (Retired), Harbert, Michigan.
Nov. 21, 1930	PERRYMAN, FRANCIS S., Assistant U. S. Manager and Actuary, Royal-Liverpool Insurance Group, 150 William Street, New York 38, N. Y.
Nov. 14, 1941	PETERS, STEFAN, Actuary, Connell, Price and Co., 161 Devonshire Street, Boston 9, Mass.
Nov. 21, 1952	PETZ, EARL F., JR., Procedures Department, Lumbermens Mutual Casualty Co., Chicago 40, Ill.
Nov. 24, 1933	PICKETT, SAMUEL C., (Retired), Macktown Road, Windsor, Conn.
Nov. 17, 1922	PINNEY, SYDNEY D., 290 Wolcott Hill Road, Wethersfield 9, Conn.
Nov. 13, 1931	PRUITT, DUDLEY M., Assistant General Manager and Actuary, General Accident Fire & Life Assurance Corp., Fourth & Walnut Sts., Philadelphia 5, Pa.
Nov. 18, 1955	RESONY, ALLIE V., Assistant Actuary, Hartford Accident and Indemnity Co., 690 Asylum Avenue, Hartford 15, Conn.
Nov. 18, 1949	RESONY, JOHN A., Casualty Actuary, Connecticut Insurance Department, State Office Building, Hartford 2, Conn.
Nov. 16, 1951	RICE, HOMER D., (Retired), 1731 Morningside Drive, Mount Dora, Florida.
Nov. 19, 1926	RICHTER, OTTO C., Chief Actuary, American Telephone & Telegraph Co., 195 Broadway, New York 7, N. Y.
May 24, 1921	RIEGEL, ROBERT, Professor of Statistics and Insurance, University of Buffalo, Buffalo 14, N. Y.
Nov. 14, 1947	RODERMUND, MATTHEW, Assistant Secretary, Interboro Mutual Indemnity Insurance Company, 270 Madison Avenue, New York 16, N. Y.
Nov. 14, 1947	ROSENBERG, NORMAN, Executive Assistant, Farmers Insurance Group, 4680 Wilshire Blvd., Los Angeles 54, Calif.
Nov. 14, 1947	ROWELL, JOHN H., Vice-President and Chief Actuary, Freedom Insurance Company, 2180 Milvia Street, Berkeley 4, Calif.
Nov. 17, 1938	RUCHLIS, ELSIE, National Bureau of Casualty Underwriters, 60 John Street, New York 7, N. Y.
Nov. 14, 1947	SALZMANN, RUTH E., Associate Actuary, Hardware Mutual Casualty Company, Hardware Dealers Mutual Fire Insurance Co., 200 Strongs Ave., Stevens Point, Wis.
Nov. 20, 1942	SATTERTHWAITE, FRANKLIN E., Consulting Statistician, Rath and Strong, Inc., 140 Federal Street, Boston, Mass.
Nov. 19, 1948	SCHLOSS, HAROLD W., Superintendent, Actuarial Department, Royal-Liverpool Insurance Group, 150 William Street, New York 38, N. Y.
Nov. 18, 1937	SHAPIRO, GEORGE I., 934 E. 9th Street, Brooklyn 30, N. Y.
Nov. 13, 1931	SILVERMAN, DAVID, Partner, Wolfe, Corcoran & Linder, 116 John Street, New York 38, N. Y.
Nov. 19, 1954	SIMON, LEROY J., Actuary, Mutual Service Casualty Company, 1923 University Avenue, St. Paul, Minn.
Nov. 19, 1929	SKELDING, ALBERT Z., Assistant Manager, National Council on Compensation Insurance, 200 Fourth Ave., New York 3, N. Y.

FELLOWS

Admitted	
Nov. 19, 1929	SKILLINGS, E. SHAW, Assistant Vice-President and Actuary, Allstate Insurance Co., 7447 Skokie Blvd., Skokie, Ill.
Nov. 18, 1932	SMICK, JACK J., Consulting Actuary, 38 Park Row, New York 7, N. Y.
Nov. 15, 1940	SMITH, SEYMOUR E., Vice-President and Actuary, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 16, 1951	SNOW, A. J., Manager, Oregon Insurance Rating Bureau, 329 S.W. 5th Avenue, Portland, Ore.
Nov. 24, 1933	ST. JOHN, JOHN B., Consulting Actuary, Box 57, Penllyn, Pa.
Nov. 18, 1927	STONE, EDWARD C., Chairman of the Board, American Employers' Insurance Company, 40 Central Street, Boston 9, Mass.
May 25, 1956	TAPLEY, DAVID A., Actuary, State Farm Automobile Insurance Co., Bloomington, Ill.
Nov. 17, 1920	TARBELL, THOMAS F., (Retired), 42 Linwold Drive, West Hartford 7, Conn.
Nov. 16, 1956	THOMAS, JAMES W., Assistant Actuary; Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
†	THOMPSON, JOHN S., 79 Douglas Road, Glen Ridge, N. J.
†	TRAIN, JOHN L., President, Utica Mutual Insurance Co., Box 530, Utica, N. Y.
Nov. 17, 1922	TRAVERSI, ANTONIO T., 59 Barry St., Neutral Bay, Sydney, Australia•
Nov. 19, 1953	TRIST, JOHN A. W., Statistical Assistant, Lumbermens Mutual Casualty Co., Mutual Insurance Bldg., 4750 Sheridan Road, Chicago 40, Ill.
Nov. 19, 1948	TURNER, PAUL A., 435 South La Cienega Boulevard, Los Angeles 48, Calif.
Nov. 14, 1947	UHTHOFF, D. R., Associate Actuary, Employers Mutual Liability Insurance Co. of Wisconsin, Wausau, Wis.
Nov. 23, 1928	VALERIUS, NELS M., Assistant Actuary, Aetna Casualty and Surety Co., Hartford 15, Conn.
Nov. 21, 1919	VAN TUYL, HIRAM O., (Retired), 17 Coolidge Ave., White Plains, N. Y.
Nov. 16, 1951	VERGANO, ELIA (Retired), 390 Central Park, W., New York 25, N. Y.
Nov. 16, 1951	VINCENT, LEWIS A., General Manager, National Board of Fire Underwriters, 85 John Street, New York 38, N. Y.
Nov. 17, 1920	WAITE, ALAN W., Secretary, The Aetna Casualty and Surety Co. 151 Farmington Ave., Hartford 15, Conn.
Nov. 16, 1951	WATSON, LEON A., (Retired), 2305 River Road, Point Pleasant, N. J.
Nov. 14, 1947	WIEDER, JOHN W., JR., Assistant Actuary, Aetna Casualty and Surety Company, Hartford 15, Conn.
Nov. 15, 1935	WILLIAMS, HARRY V., Vice-President, Hartford Accident and Indemnity Co., 690 Asylum Ave., Hartford 15, Conn.
Nov. 14, 1941	WILLIAMSON, W., RULON, Research Actuary, 3400 Fairhill Drive, Washington 23, D.C.
Nov. 13, 1931	WITTICK, HERBERT E., General Manager and Secretary, Pilot Insurance Co., 199 Bay Street, Toronto 1, Canada.
Nov. 18, 1949	WOLFRUM, RICHARD J., Assistant Actuary, Liberty Mutual Insurance Company, 175 Berkeley Street, Boston 17, Mass.
Nov. 16, 1951	WOODALL, JOHN P., Manager, South-Eastern Underwriters Association, Atlanta 2, Georgia.
Nov. 19, 1953	YOUNT, HUBERT W., Vice President, Liberty Mutual Insurance Company, 175 Berkeley Street, Boston 17, Mass.

ASSOCIATES

Admitted	
Nov. 15, 1918	ACKERMAN, SAUL B., Professor Emeritus of Insurance School of Commerce, New York University, Washington Square, New York 6, N. Y.
Nov. 16, 1939	AIN, SAMUEL N., Consulting Actuary, 120 Broadway, New York 5 N. Y.
Apr. 5, 1928	ALLEN, AUSTIN F., President, Texas Employers' Insurance Association, P.O. Box 2759, Dallas 1, Texas.
Nov. 18, 1955	ANDREWS, EDWARD C., Assistant Actuary; Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 15, 1918	ANKERS, R. E., Vice-President and Treasurer, The Southland Life Insurance Company, Dallas, Texas
Nov. 21, 1930	ARCHIBALD, A. EDWARD, Director, Management Controls, Investors Diversified Services, Inc., Minneapolis 2, Minn.
Nov. 24, 1933	BARRON, JAMES C., Assistant Treasurer, General Reinsurance Corporation and North Star Reinsurance Corporation, 90 John Street, New York 38, N. Y.
Nov. 23, 1928	BATEMAN, ARTHUR E., c/o Arthur Q. Melendy, Southboro, Mass.
Nov. 15, 1940	BATHO, BRUCE, Vice-President and Actuary, Life Insurance Company of Georgia, 573 W. Peachtree St., N. E., Atlanta 1, Georgia.
Nov. 16, 1956	BERG, ROY A., JR., Actuarial Department, Old Republic Life Insurance Co., 307 North Michigan Ave., Chicago 1, Ill.
Nov. 18, 1955	BERQUIST, JAMES R., Actuarial Department, Employers Mutual Liability Insurance Co. of Wisconsin, Wausau, Wis.
Nov. 18, 1925	BITTEL, W. HAROLD, Chief Actuary, Department of Banking and Insurance, Trenton 7, N. J.
Nov. 17, 1920	BLACK, NELLAS C., Manager, Statistical Department, Maryland Casualty Co., Baltimore 3, Md.
Nov. 15, 1940	BLACKHALL, JOHN M., Assistant Actuary, California-Western States Life Insurance Company, 2020 L Street, Sacramento, Calif.
Nov. 22, 1934	BOMSE, EDWARD L., Assistant Manager, Foreign Department, Royal-Liverpool Insurance Group, 150 William Street, New York 38, N. Y.
Nov. 16, 1956	BORNHUETTER, RONALD L., Actuarial Division, National Bureau of Casualty Underwriters, 60 John Street, New York 7, N. Y.
Nov. 23, 1928	BOWER, P. S., Assistant General Manager and Treasurer, The Great-West Life Assurance Company, Winnipeg, Manitoba, Canada.
Nov. 15, 1918	BRUNNQUELL, HELMUTH G., (Retired), 1013 East Circle Drive, Milwaukee 17, Wis.
Oct. 22, 1915	BUFFLER, LOUIS, Underwriting Director, The State Insurance Fund, 199 Church Street, New York 7, N. Y.
Nov. 20, 1924	BUGBEE J. M., Manager, Automobile Department, Maryland Casualty Co., Box 1228, Baltimore 3, Md.

ASSOCIATES

Admitted	
Mar. 31, 1920	BURT, MARGARET A., Office of George B. Buck, Consulting Actuary, 150 Nassau Street, New York 38, N. Y.
Nov. 17, 1922	CAVANAUGH, L. D., Chairman, Federal Life Insurance Co., 168 N. Michigan Avenue, Chicago 1, Ill.
Nov. 18, 1927	CHEN, S. T., Consulting Actuary, Home Security Life Insurance Company, 106 Hong Kong Hotel Building, Pedder Street, Hong Kong, China.
Nov. 18, 1955	COATES, WILLIAM D., Assistant Actuary, Accident and Health Actuarial Department, Continental Casualty Co., Chicago, 4, Ill.
Nov. 19, 1953	CONTE, JOSEPH P., Secretary-Treasurer, Columbian Mutual Life Insurance Co., 305 Main Street, Binghamton, N. Y.
Nov. 24, 1933	CRAWFORD, W. H., Treasurer, Industrial Indemnity Co., 155 Sansome Street, San Francisco 4, Calif.
Nov. 18, 1932	CRIMMINS, JOSEPH B., Associate Actuary, Metropolitan Life Insurance Co., 1 Madison Avenue, New York 10, N. Y.
Nov. 19, 1953	CROFTS, GEOFFREY, Associate Professor of Actuarial Science, Occidental College, Los Angeles 41, Calif.
Nov. 21, 1952	DANIEL, C. M., International Business Machines Corporation, New York, N. Y.
Nov. 18, 1925	DAVIS, MALVIN E., Vice-President and Chief Actuary, Metropolitan Life Insurance Co., 1 Madison Avenue, New York 10, N. Y.
Nov. 16, 1956	DORF, STANLEY, Actuarial Department, Royal-Liverpool Insurance Group, 150 William Street, New York 38, N. Y.
Nov. 14, 1941	DOWLING, WILLIAM F., President, New York Mutual Casualty Insurance Co., 260 Fourth Avenue, New York 10, N. Y.
Nov. 16, 1956	DROBISCH, MILES R., Statistician, California Inspection Rating Bureau, 500 Sansome Street, San Francisco 11, Calif.
Nov. 16, 1956	DROPKIN, LESTER B., Actuarial Department, National Bureau of Casualty Underwriters, 60 John Street, New York 7, N. Y.
Nov. 19, 1954	EATON, KARL F., Analyst, Business Men's Assurance Co., Kansas City 41, Mo.
June 5, 1925	EGER, FRANK A., Secretary-Comptroller, Indemnity Insurance Co. of North America, 1600 Arch Street, Philadelphia 1, Pa.
Nov. 19, 1954	EIDE, K. ARNE, Act. Ind. Val. Section, Metropolitan Life Insurance Company, 1 Madison Avenue, New York 10, N. Y.
Nov. 16, 1956	FAUST, J. E., JR., Associate Actuary, State Farm Automobile Insurance Co., Bloomington, Ill.
Nov. 16, 1923	FITZ, L. LEROY, Group Department, John Hancock Mutual Life Insurance Company, Boston 17, Mass.
Nov. 16, 1956	FLACK, PAUL R., Actuarial Assistant, General Accident Fire & Life Assurance Corp. Ltd., 414 Walnut St., Philadelphia 5, Pa.
Nov. 16, 1923	FLEMING, FRANK A., General Manager, Mutual Insurance Rating Bureau, 111 Fourth Ave., New York 3, N. Y.
Nov. 21, 1952	FRANKLIN, N. M., Actuary, Surety Association of America, 60 John Street, New York 7, N. Y.

ASSOCIATES

Admitted	
Nov. 13, 1936	FRUECHTEMEYER, FRED J., Assistant to Comptroller, The Andrew Jergens Company, 2535 Spring Grove Ave., Cincinnati 14, Ohio.
Nov. 19, 1929	FURNIVALL, MAURICE L., Associate Actuary, Accident and Group Actuarial Department, The Travelers Insurance Co., 700 Main Street, Hartford 15, Conn.
Nov. 19, 1954	GAINES, NATHANIEL, Actuary, Pension Planning Company, 260 Madison Avenue, New York 16, N. Y.
Nov. 18, 1932	GETMAN, RICHARD A., Assistant Actuary, Life Department, The Travelers Insurance Co., 700 Main St., Hartford 15, Conn.
Nov. 17, 1922	GIBSON, JOSEPH P., JR., President, American Mutual Reinsurance Co., 919 North Michigan Ave., Chicago 11, Ill.
Nov. 16, 1923	GILDEA, JAMES F., Assistant Actuary; Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 19, 1953	GILLAM, WILLIAM S., Research Unit, National Bureau of Casualty Underwriters, 60 John Street, New York 7, N. Y.
Nov. 14, 1947	GINGERY, STANLEY W., Associate Actuary, The Prudential Insurance Co., Newark, N. J.
Nov. 18, 1927	GREEN, WALTER C., Consulting Actuary, Continental Bank Building, Salt Lake City, Utah.
Nov. 15, 1940	GROSSMAN, ELI A., Vice-President-Actuary, Union Labor Life Insurance Co., 200 East 70th Street, New York 21, N. Y.
Nov. 15, 1935	GUERTIN, ALFRED N., Actuary, American Life Convention, 230 N. Michigan Avenue, Chicago 1, Ill.
Nov. 16, 1939	HAGEN, OLAF E., Metropolitan Life Insurance Company, 1 Madison Avenue, New York 10, N. Y.
Nov. 18, 1921	HAGGARD, ROBERT E., (Retired), 922 The Alameda, Berkeley 7, Calif.
Nov. 17, 1922	HALL, HARTWELL L., Chief Examiner, Connecticut Insurance Department, 165 Capitol Avenue, Hartford 2, Conn.
Nov. 13, 1936	HAM, HUGH P., General Manager, The British American Assurance Company, 40 Scott Street, Toronto 1, Ontario, Can.
Nov. 19, 1953	HARACK, JOHN, Manager, Technical Assistance Division, Blue Cross Commission, 425 North Michigan, Chicago 11, Ill.
Mar. 24, 1932	HARRIS, SCOTT, Executive Vice-President, Joseph Froggatt & Co., Inc., 74 Trinity Place, New York 6, N. Y.
Mar. 25, 1924	HART, WARD VAN B., Associate Actuary, Connecticut General Life Insurance Company, 55 Elm Street, Hartford 15, Conn.
Nov. 21, 1919	HAYDON, GEORGE F., Manager Emeritus, Wisconsin Compensation Rating Bureau, 623 North 2nd Street, Milwaukee 3, Wis.
Nov. 19, 1953	HEAD, GLENN O., Vice President and Actuary, The United States Life Insurance Co., 84 William Street, New York 38, N. Y.
Nov. 17, 1927	HIPP, GRADY H., Underwriting Vice-President, Liberty Life Insurance Co., Greenville, S. C.
Nov. 16, 1945	HOLZINGER, ERNEST, Actuary, Pension Planning Company, 260 Madison Avenue, New York 16, N. Y.

ASSOCIATES

Admitted	
Nov. 19, 1929	JACOBS, CARL N., President, Hardware Mutual Casualty Co. and Hardware Dealers Mutual Fire Insurance Co., 200 Strongs Avenue, Stevens Point, Wis.
Nov. 18, 1921	JENSEN, EDWARD S., Assistant Vice-President, Group Department, Occidental Life Insurance Co. of California, 1151 So. Broadway, Los Angeles 55, Calif.
Nov. 21, 1930	JONES, H. LLOYD, (Retired), 9 Midland Gardens, Bronxville, N. Y.
Nov. 21, 1919	JONES, LORING D., (Retired), 64 Raymond Avenue, Rockville Centre, Long Island, N. Y.
Nov. 21, 1952	JONES, NATHAN F., Associate Actuary, The Prudential Insurance Company of America, Newark, N. J.
Nov. 19, 1953	KATES, PHILLIP B., Actuary, Southern Fire and Casualty Company, 4277 Lyons View Pike, Knoxville, Tenn.
Nov. 17, 1922	KIRK, CARL L., Deputy U.S. Manager, Zurich Insurance Co., 135 South LaSalle Street, Chicago 3, Ill.
Nov. 15, 1935	KITZROW, E. W., General Manager, Mid-Century Insurance Company, member of Farmers Insurance Group, 4680 Wilshire Boulevard, Los Angeles 54, Calif.
Nov. 16, 1956	KLAASSEN, ELDON J., Actuarial Assistant, A & H Actuarial Department, Continental Casualty Co., 310 South Michigan Avenue, Chicago 4, Ill.
Nov. 14, 1947	LUFKIN, ROBERT W., Office Manager, Craftsman Insurance Co., 137 Newbury St., Boston, Mass.
Mar. 24, 1932	MAGRATH, JOSEPH J., Secretary, Federal Insurance Company, 90 John Street, New York 38, N. Y.
Nov. 16, 1956	MAKGILL, STEPHEN S., Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 18, 1925	MALMUTH, JACOB, Principal Examiner, New York State Insurance Department, 61 Broadway, New York 6, N. Y.
Mar. 24, 1927	MARSH, CHARLES V. R., (Retired), 1430 Glencoe Road, P. O. Box 1115, Winter Park, Florida.
Nov. 16, 1956	MATHWICK, L. F., Group Rate Analyst, Employers' Mutual Liability Insurance Co. of Wisconsin, 407 Grant St., Wausau, Wis.
Nov. 13, 1936	MAYER, WILLIAM H., JR., Associate Manager, Group Contract Bureau, Metropolitan Life Insurance Co., 1 Madison Avenue, New York 10, N. Y.
Nov. 17, 1950	MAYERSON, ALLEN L., Assistant Professor of Mathematics and Insurance, University of Michigan, Ann Arbor, Mich.
May 26, 1955	McDONALD, MILTON G., Casualty Actuary, Department of Banking and Insurance, 100 Nashua Street, Boston 14, Mass.
Nov. 17, 1922	McIVER, R. A., Actuary, Washington National Insurance Co., 1630 Chicago Avenue, Evanston, Ill.
Nov. 13, 1931	MILLER, HENRY C., Comptroller, California State Compensation Insurance Fund, 450 McAllister Street, San Francisco 1, Calif.
Nov. 19, 1953	MILLS, RICHARD J., Statistical Department, Lumbermens Mutual Casualty Company, 4750 Sheridan Road, Chicago 40, Ill.

ASSOCIATES

Admitted	
Nov. 18, 1937	MINOR, EDUARD H., Assistant Actuary, Metropolitan Life Insurance Co., 1 Madison Avenue, New York 10, N. Y.
Nov. 17, 1922	MONTGOMERY, JOHN C., (Retired), 165 Westervelt Ave., Tenafly, N. J.
May 25, 1923	MOORE, JOSEPH P., Mutual Life and Citizens Assurance Co., Ltd., P.O. Box 1770, Place D'arms, Montreal, Canada.
Nov. 18, 1937	MYERS, ROBERT J., Chief Actuary, Social Security Administration, Washington 25, D.C.
Nov. 15, 1935	NELSON, S. TYLER, Assistant General Manager, American Agricultural Mutual Insurance Co., Room 2300, Merchandise Mart, Chicago 54, Ill.
Oct. 27, 1916	NEWELL, WILLIAM, (Retired), 1225 Park Avenue, New York 28, N. Y.
Nov. 18, 1925	NICHOLSON, EARL, Actuary, Joseph Froggatt & Co., Inc., 74 Trinity Place, New York 6, N. Y.
Nov. 19, 1954	OTTESON, PAUL M., Vice-President, Federated Mutual Implement and Hardware Insurance Company, 129 East Broadway, Owatonna, Minn.
May 23, 1919	OTTO, WALTER E., President, Michigan Mutual Liability Co., Associated General Fire Co., Mutual Building, 28 West Adams Avenue, Detroit 26, Mich.
Nov. 19, 1926	OVERHOLSER, DONALD M., Office of George B. Buck, Consulting Actuary, 150 Nassau Street, New York 7, N. Y.
Nov. 20, 1924	PENNOCK, RICHARD M., (Retired), 12 E. Lodges Lane, Cynwyd, Pa.
Nov. 21, 1952	PENNYCOOK, RODERICK B., Assistant to the Executive Director, Manitoba Hospital Service Association, 116 Edmonton Street, Winnipeg, Man., Canada.
Nov. 19, 1953	PERKINS, WILLIAM J., Actuarial Assistant, Group Department, The London Life Insurance Company, London, Ont. Canada.
Nov. 14, 1947	PERRY, ROBERT C., First Vice-President, State Farm Life Insurance Company, Bloomington, Ill.
Nov. 16, 1956	PHILLIPS, H. J., JR., Actuarial Assistant, Employers' Liability Assurance Corp. Ltd., 110 Milk Street, Boston 7, Mass.
Nov. 19, 1920	PHILLIPS, JOHN H., Vice-President and Actuary, Employers' Mutual Liability Insurance Co., and Employers' Mutual Fire Insurance Company, 407 Grant Street, Wausau, Wis.
Nov. 17, 1920	PIKE, MORRIS, Second Vice-President, John Hancock Mutual Life Insurance Co., Boston 17, Mass.
Nov. 16, 1956	PINNEY, ALLEN D., Casualty, Fire & Marine Actuarial Department The Travelers Insurance Co., Hartford 15, Conn.
Nov. 23, 1928	PIPER, K. B., Vice-President, Provident Life and Accident Insurance Co., 721 Broad Street, Chattanooga 2, Tenn.
Nov. 17, 1922	POORMAN, WILLIAM F., President, Central Life Assurance Company, 611 Fifth Avenue, Des Moines 6, Iowa.
Nov 13, 1936	POTOFSKY, SYLVIA, Senior Actuary, The State Insurance Fund, 199 Church Street, New York, N. Y.
Nov. 15, 1918	RAYWID, JOSEPH, Woodward and Fondiller, Inc., 200 West 57th Street, New York 19, N. Y.

ASSOCIATES

Admitted	
Nov. 19, 1932	RICHARDSON, HARRY F., (Retired), Seven Oaks, Bozman, Maryland.
Nov. 19, 1953	RICHMOND, OWEN D., Analyst, Business Men's Assurance Co., Kansas City, Mo.
Nov. 18, 1932	ROBERTS, JAMES A., Accident and Group Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford 15, Conn.
Nov. 16, 1956	ROBERTS, LEWIS H., Actuarial Trainee, National Bureau of Casualty Underwriters, 60 John Street, New York 7, N. Y.
Nov. 18, 1927	SARASON, HARRY M., Consulting Actuary, 1060 South Broadway, Los Angeles 15, Calif.
Nov. 16, 1923	SAWYER, ARTHUR, (Retired), 217 W. San Antonio, San Clemente, Cal.
Nov. 14, 1947	SCAMMON, LAWRENCE W., Actuary, Massachusetts Automobile Rating and Accident Prevention Bureau, Massachusetts Workmen's Compensation Rating and Inspection Bureau, 89 Broad Street, Boston 10, Mass.
Nov. 19, 1954	SCHULMAN, JUSTIN, Statistical Department, Greater New York Mutual Insurance Co., 111 Fourth Avenue, New York 3, N. Y.
Nov. 14, 1947	SCHWARTZ, MAX J., Associate Actuary (Casualty), New York State Insurance Department, Albany 1, N. Y.
Nov. 20, 1930	SEVILLA, EXEQUIEL S., President, Manager and Actuary, National Life Insurance Co. of the Philippines, Regina Building, P.O. Box 2056, Manila, Philippines.
Nov. 20, 1924	SHEPPARD, NORRIS E., Professor of Mathematics, University of Toronto, Toronto 5, Canada.
Nov. 15, 1918	SIBLEY, JOHN L., (Retired), 225 Amesbury Road, Haverhill, Mass.
Nov. 16, 1956	SMITH, EDWARD M., Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 19, 1926	SOMERVILLE, WILLIAM F., (Retired), 648 Sibley Highway, St. Paul 7, Minn.
Nov. 18, 1925	SOMMER, ARMAND, Vice President, Continental Casualty Co., Transportation Insurance Co., and United States Life Insurance Co., 310 So. Michigan Avenue, Chicago 4, Ill.
Nov. 15, 1918	SPENCER, HAROLD S., (Retired), 8 Chelsea Lane, West Hartford, Conn.
Nov. 20, 1924	STELLWAGEN, H. P., Executive Vice-President, Indemnity Insurance Company of North America, 1600 Arch Street, Philadelphia 1, Pa.
Nov. 16, 1956	STERN, PHILIPP K., Assistant Actuary, Mutual Insurance Rating Bureau, 111 Fourth Avenue, New York 3, N. Y.
Nov. 16, 1923	STOKE, KENDRICK, Actuary, Michigan Mutual Liability Company, 28 W. Adams, Detroit 26, Mich.
Nov. 21, 1930	SULLIVAN, WALTER F., Actuary, State Compensation Insurance Fund, 450 McAllister Street, San Francisco 1, Calif.
Nov. 16, 1956	TARBELL, LUTHER L., JR., Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 21, 1919	TRENCH, FREDERICK H., Budget Director, Utica Mutual Insurance Co., Utica 1, N. Y.

ASSOCIATES

Admitted	
Nov. 20, 1924	UHL, M. ELIZABETH, National Bureau of Casualty Underwriters, 60 John Street, New York 7, N. Y.
Nov. 18, 1932	WEINSTEIN, MAX S., Actuary, New York State Employees' Retirement System, 256 Washington Avenue, Albany 1, N. Y.
Nov. 18, 1925	WELLMAN, ALEXANDER C., Senior Vice-President, Protective Life Insurance Co., Birmingham, Ala.
Nov. 21, 1930	WELLS, WALTER I., Secretary, Sickness and Accident Division, State Mutual Life Assurance Co., 340 Main Street, Worcester 8, Mass.
Nov. 16, 1951	WERMEL, MICHAEL T., Consulting Actuary, Woodward and Fondiller, 417 South Hill St., Los Angeles 13, Calif.
Nov. 18, 1927	WHITBREAD, F. G., Assistant Vice-President, Lincoln National Life Insurance Company, 1301-27 S. Harrison Street, Fort Wayne, Ind.
Nov. 19, 1948	WHITE, AUBREY, Vice President and Actuary, Ostheimer & Co., 1510 Chestnut St., Philadelphia 2, Pa.
Nov. 19, 1954	WILLIAMS, DEWEY G., Assistant Actuary, Texas Employers' Insurance Association, Dallas 1, Texas.
Nov. 16, 1956	WILLIAMS, PHILLIP A., Casualty, Fire & Marine Actuarial Department, The Travelers Insurance Co., Hartford 15, Conn.
Nov. 18, 1955	WILSON, JAMES C., Actuary, Wolverine Insurance Co., Battle Creek, Mich.
Nov. 16, 1939	WITTLAKE, J. CLARKE, Vice President, Business Men's Assurance Co., B.M.A. Bldg., Kansas City 10, Mo.
Nov. 19, 1954	WRIGHT, BYRON, Casualty Actuary, New Jersey Insurance Department, Trenton, N. J.
Oct. 22, 1915	WOOD, DONALD M., Partner, Childs & Wood, 175 W. Jackson Blvd., Chicago 4, Ill.
Nov. 18, 1937	WOOD, DONALD M., JR., Childs & Wood, 175 West Jackson Blvd., Chicago 4, Ill.
Nov. 18, 1927	WOOD, MILTON J., Vice-President and Actuary, Life, Accident and Group Actuarial Department, The Travelers Insurance Co., 700 Main Street, Hartford 15, Conn.
Nov. 22, 1934	WOODWARD, BARBARA H., Regional General Counsel, The Reuben H. Donnelley Corporation, 305 East 45th Street, New York 17, N. Y.
Nov. 16, 1956	WOODWORTH, JAMES H., Actuarial Department, Hartford Accident and Indemnity Co., 690 Asylum Avenue, Hartford 15, Conn.
Nov. 17, 1950	WOODDY, JOHN C., Assistant Actuary, North American Reassurance Company, 161 East 42nd Street, New York 17, N. Y.
Nov. 18, 1925	WOOLERY, JAMES MYRON, Vice-President and Actuary, Occidental Life Insurance Company, Raleigh, N. C.

OFFICERS OF THE SOCIETY

Since Date of Organization

Elected	*President*	*Vice-Presidents*	
1914-1915	*Isaac M. Rubinow	*Albert H. Mowbray	*Benedict D. Flynn
1916-1917	*James D. Craig	*Joseph H. Woodward	*Harwood E. Ryan
1918	*Joseph H. Woodward	*Benedict D. Flynn	George D. Moore
1919	*Benedict D. Flynn	George D. Moore	William Leslie
1920	*Albert H. Mowbray	William Leslie	*Leon S. Senior
1921	*Albert H. Mowbray	*Leon S. Senior	*Harwood E. Ryan
1922	*Harwood E. Ryan	Gustav F. Michelbacher	Edmund E. Cammack
1923	William Leslie	Gustav F. Michelbacher	Edmund E. Cammack
1924-1925	Gustav F. Michelbacher	*Sanford B. Perkins	Ralph H. Blanchard
1926-1927	*Sanford B. Perkins	George D. Moore	Thomas F. Tarbell
1928-1929	George D. Moore	Sydney D. Pinney	Paul Dorweiler
1930-1931	Thomas F. Tarbell	*Roy A. Wheeler	Winfield W. Greene
1932-1933	Paul Dorweiler	William F. Roeber	*Leon S. Senior
1934-1935	Winfield W. Greene	Ralph H. Blanchard	Charles J. Haugh
1936-1937	*Leon S. Senior	Sydney D. Pinney	Francis S. Perryman
1938-1939	Francis S. Perryman	Harmon T. Barber	William J. Constable
1940	Sydney D. Pinney	Harold J. Ginsburgh	James M. Cahill
1941	Ralph H. Blanchard	Harold J. Ginsburgh	James M. Cahill
1942	Ralph H. Blanchard	Albert Z. Skelding	Charles J. Haugh
1943-1944	Harold J. Ginsburgh	Albert Z. Skelding	Charles J. Haugh
1945-1946	Charles J. Haugh	James M. Cahill	Harry V. Williams
1947-1948	James M. Cahill	Harmon T. Barber	Russell P. Goddard
1949-1950	Harmon T. Barber	Thomas O. Carlson	Norton E. Masterson
1951-1952	Thomas O. Carlson	Joseph Linder	Seymour E. Smith
1953-1954	Seymour E. Smith	Dudley M. Pruitt	John A. Mills
1955-1956	Norton E. Masterson	Clarence A. Kulp	Arthur N. Matthews

Secretary-Treasurer

1914-1917....*C. E. Scattergood
1918-1953..........R. Fondiller
1954-1956........A. Z. Skelding

Editor†

1914.............W. W. Greene
1915-1917..........R. Fondiller
1918.............W. W. Greene
1919-1921....G. F. Michelbacher
1922-1923.......O. E. Outwater
1924-1932.......R. J. McManus
1933-1943 ....*C. W. Hobbs
1944-1954.......E. C. Maycrink
1955-1956........... E. S. Allen

Librarian†

1914............W. W. Greene
1915..............R. Fondiller
1916-1921..........L. I. Dublin
1922-1924........*E. R. Hardy
1925-1937...........W. Breiby
1937-1947........T. O. Carlson
1948-1950..........*S. M. Ross
1951-1956......G. R. Livingston

Chairman—Examination Comm.

1949-1952........R. A. Johnson
1952-1956.....J. W. Wieder, Jr.

*Deceased.
†The offices of Editor and Librarian were not separated until 1916.

FELLOWS WHO HAVE DIED

The (†) denotes charter members at date of organization, November 7, 1914.

Admitted		Died
Nov. 19, 1948	Arthur L. Bailey	Aug. 12, 1954
May 23, 1924	William B. Bailey	Jan. 10, 1952
†	Roland Benjamin	July 2, 1949
May 24, 1921	Edward J. Bond	Nov. 12, 1941
May 19, 1915	Thomas Bradshaw	Nov. 10, 1939
June 5, 1925	William Brosmith	Aug. 22, 1937
†	William A. Budlong	June 4, 1934
Nov. 18, 1932	Charles H. Burhans	June 15, 1942
Feb. 19, 1915	F. Highlands Burns	Mar. 30, 1935
†	Raymond V. Carpenter	Mar. 11, 1947
Feb. 19, 1915	Gorden Case	Feb. 4, 1920
Nov. 23, 1928	Walter P. Comstock	May 11, 1951
†	Charles T. Conway	July 23, 1921
†	John A. Copeland	June 12, 1953
†	Walter G. Cowles	May 30, 1942
†	James D. Craig	May 27, 1940
†	James McIntosh Craig	Jan. 20, 1922
May 26, 1916	Frederick S. Crum	Sept. 2, 1921
†	Alfred Burnett Dawson	June 21, 1931
†	Miles Menander Dawson	Mar. 27, 1942
†	Elmer H. Dearth	Mar. 26, 1947
†	Eckford C. DeKay	July 31, 1951
May 19, 1915	Samuel Deutschberger	Jan. 18, 1929
†	Ezekiel Hinton Downey	July 9, 1922
May 19, 1915	Earl O. Dunlap	July 5, 1944
†	Edward B. Fackler	Jan. 8, 1952
†	David Parks Fackler	Oct. 30, 1924
Feb. 19, 1915	Claude W. Fellows	July 15, 1938
†	Benedict D. Flynn	Aug. 22, 1944
†	Charles S. Forbes	Oct. 2, 1943
May 26, 1916	Lee K. Frankel	July 25, 1931
†	Charles H. Franklin	May 1951
Feb. 25, 1916	Joseph Froggatt	Sept. 28, 1940
†	Harry Furze	Dec. 26, 1945
Feb. 19, 1915	Fred S. Garrison	Nov. 14, 1949
†	Theodore E. Gaty	Aug. 22, 1925
May 19, 1915	James W. Glover	July 15, 1941
Oct. 22, 1915	George Graham	Apr. 15, 1937
Oct. 22, 1915	Thompson B. Graham	July 24, 1946
May 25, 1923	William A. Granville	Feb. 4, 1943
†	William H. Gould	Oct. 28, 1936
†	Robert Cowen Lees Hamilton	Nov. 15, 1941
Oct. 27, 1916	Edward R. Hardy	June 29, 1951
Nov. 21, 1919	Robert Henderson	Feb. 16, 1942
†	Robert J. Hillas	May 17, 1940
Nov. 15, 1918	Frank Webster Hinsdale	Mar. 18, 1932
May 23, 1924	Clarence W. Hobbs	July 21, 1944
Nov. 19, 1926	Charles E. Hodges	Jan. 22, 1937
Oct. 22, 1915	Lemuel G. Hodgkins	Dec. 26, 1951
†	Frederick L. Hoffman	Feb. 23, 1946
Oct. 22, 1915	Charles H. Holland	Dec. 28, 1951

FELLOWS WHO HAVE DIED—*Continued*

Admitted		Died
Nov. 21, 1919	Carl Hookstadt	Mar. 10, 1924
†	Charles Hughes	Aug. 27, 1948
Nov. 19, 1929	Robert S. Hull	Nov. 30, 1947
†	Burritt A. Hunt	Sept. 3, 1943
Nov. 28, 1921	William Anderson Hutcheson	Nov. 19, 1942
Nov. 19, 1929	Henry Hollister Jackson	May 27, 1955
May 19, 1915	William C. Johnson	Oct. 7, 1943
Nov. 23, 1928	F. Robertson Jones	Dec. 26, 1941
Nov. 18, 1921	Thomas P. Kearney	Feb. 11, 1928
Nov. 19, 1926	Gregory Cook Kelly	Sept. 11, 1948
Oct. 22, 1915	Virgil Morrison Kime	Oct. 15, 1918
†	Edwin W. Kopf	Aug. 3, 1933
Feb. 17, 1915	John M. Laird	June 20, 1942
Feb. 19, 1915	Abb Landis	Dec. 9, 1937
Nov. 17, 1922	Arnette Roy Lawrence	Dec. 1, 1942
Nov. 18, 1921	James Fulton Little	Aug. 11, 1938
Nov. 23, 1928	Edward C. Lunt	Jan. 13, 1941
Feb. 19, 1915	Harry Lubin	Dec. 20, 1920
Nov. 16, 1923	D. Ralph McClurg	Apr. 27, 1947
May 23, 1919	Alfred McDougald	July 28, 1944
†	William N. Magoun	Dec. 11, 1954
Feb. 15, 1915	Franklin B. Mead	Nov. 29, 1933
Apr. 20, 1917	Marcus Meltzer	Mar. 27, 1931
†	David W. Miller	Jan. 18, 1936
†	James F. Mitchell	Feb. 9, 1941
†	Henry Moir	June 8, 1937
Nov. 19, 1926	William L. Mooney	Oct. 21, 1948
Feb. 19, 1915	William J. Montgomery	Aug. 20, 1915
May 19, 1915	Edward Bontecou Morris	Dec. 19, 1929
†	Albert H. Mowbray	Jan. 7, 1949
†	Frank Mullaney	Jan. 22, 1953
†	Lewis A. Nicholas	Apr. 21, 1940
†	Stanley L. Otis	Oct. 12, 1937
Nov. 13, 1926	Bertrand A. Page	July 30, 1941
Nov. 18, 1921	Sanford B. Perkins	Sept. 16, 1945
Nov. 15, 1918	William Thomas Perry	Oct. 25, 1940
Nov. 19, 1926	Jesse S. Phillips	Nov. 6, 1954
†	Edward B. Phelps	July 24, 1915
†	Charles Grant Reiter	July 30, 1937
†	Charles H. Remington	Mar. 21, 1938
May 23, 1919	Frederick Richardson	July 22, 1955
Nov. 17, 1943	Samuel M. Ross	July 24, 1951
†	Isaac M. Rubinow	Sept. 1, 1936
†	Harwood Eldridge Ryan	Nov. 2, 1930
†	Arthur F. Saxton	Feb. 26, 1927
†	Emil Scheitlin	May 2, 1946
†	Leon S. Senior	Feb. 3, 1940
Nov. 24, 1933	Robert V. Sinnott	Dec. 15, 1952
April 20, 1917	Charles Gordon Smith	June 22, 1938
Feb. 19, 1915	John T. Stone	May 9, 1920
Feb. 25, 1916	Wendell Melville Strong	Mar. 30, 1942
Oct. 22, 1915	William R. Strong	Jan. 10, 1946
†	Robert J. Sullivan	July 19, 1934

FELLOWS WHO HAVE DIED—*Continued*

Admitted		*Died*
Nov. 22, 1934	Walter H. Thompson	May 25, 1935
Nov. 18, 1921	Guido Toja	Feb. 28, 1933
Nov. 15, 1935	Harry V. Waite	Aug. 14, 1951
Nov. 18, 1925	Lloyd A. H. Warren	Sept. 30, 1949
May 23, 1919	Archibald A. Welch	May 8, 1945
Nov. 19, 1926	Roy A. Wheeler	Aug. 26, 1932
†	Albert W. Whitney	July 27, 1943
†	Lee J. Wolfe	Apr. 28, 1949
†	S. Herbert Wolfe	Dec. 31, 1927
May 24, 1921	Arthur B. Wood	June 14, 1952
†	Joseph H. Woodward	May 15, 1928
†	William Young	Oct. 23, 1927

ASSOCIATES WHO HAVE DIED

Admitted		*Died*
May 23, 1924	Milton Acker	Aug. 16, 1956
Oct. 22, 1915	Don A. Baxter	Feb. 10, 1920
May 25, 1923	Harilaus E. Economidy	Apr. 13, 1948
Nov. 20, 1924	John Froberg	Oct. 11, 1949
Nov. 22, 1934	John J. Gately	Nov. 3, 1943
Nov. 14, 1947	Harold J. George	Apr. 1, 1952
Nov. 19, 1929	Harold R. Gordon	July 8, 1948
Nov. 20, 1924	Leslie LeVant Hall	Mar. 8, 1931
Oct. 31, 1917	Edward T. Jackson	May 8, 1939
Nov. 21, 1919	Rolland V. Mothersill	July 25, 1949
Nov. 19, 1929	Fritz Muller	Apr. 27, 1945
Nov. 23, 1928	Karl Newhall	Oct. 24, 1944
Nov. 18, 1921	Arthur G. Smith	May 2, 1956
Nov. 18, 1927	Alexander A. Speers	June 25, 1941
Mar. 23, 1921	Arthur E. Thompson	Jan. 17, 1944
Nov. 21, 1919	Walter G. Voogt	May 8, 1945
May 23, 1919	Charles S. Warren	May 1, 1952
Nov. 18, 1925	James H. Washburn	Aug. 19, 1946
Nov. 17, 1920	James J. Watson	Feb. 23, 1937
Nov. 18, 1921	Eugene R. Welch	Jan. 17, 1945
Mar. 21, 1929	Charles A. Wheeler	July 2, 1956
Nov. 15, 1918	Albert Edward Wilkinson	June 11, 1930
Oct. 22, 1915	Charles E. Woodman	Dec. 16, 1955

SCHEDULE OF MEMBERSHIP, NOVEMBER 16, 1956

	Fellows	Associates	Total
Membership, November 18, 1955	170	142	312
Additions:			
By Election	...	...	...
By Reinstatement	...	...	...
By Examination	11	18	29
	181	160	341
Deductions:			
By Death	...	4	4
By Withdrawal	...	...	...
By Transfer from Associate to Fellow	...	8	8
Membership, November 16, 1956	181	148	329

CONSTITUTION

(As Amended November 17, 1950)

Article I.—*Name.*

This organization shall be called the Casualty Actuarial Society.

Article II.—*Object.*

The object of the Society shall be the promotion of actuarial and statistical science as applied to the problems of insurance, other than life insurance, by means of personal intercourse, the presentation and discussion of appropriate papers, the collection of a library and such other means as may be found desirable.

The Society shall take no partisan attitude, by resolution or otherwise, upon any question relating to insurance.

Article III.—*Membership.*

The membership of the Society shall be composed of two classes, Fellows and Associates. Fellows only shall be eligible to office or have the right to vote.

The Fellows of the Society shall be the present Fellows and those who may be duly admitted to Fellowship as hereinafter provided. The Associates shall be the present Associates and those who may be duly admitted to Associateship as hereinafter provided.

Any person may, upon nomination to the Council by two Fellows of the Society and approval by the Council of such nomination with not more than one negative vote, become enrolled as an Associate of the Society, provided that he shall pass such examination as the Council may prescribe. Such examination may be waived in the case of a candidate who for a period of not less than two years has been in responsible charge of the Statistical or Actuarial Department of an insurance organization (other than life insurance) or has had such other practical experience in insurance (other than life insurance) as, in the opinion of the Council, renders him qualified for Associateship.

Any person who shall have qualified for Associateship may become a Fellow on passing such final examination as the Council may prescribe. Otherwise, no one shall be admitted as a Fellow unless recommended by a duly called meeting of the Council with not more than three negative votes, followed by a three-fourths ballot of the Fellows present and voting at a meeting of the Society.

Article IV.—*Officers and Council.*

The officers of the Society shall be a President, two Vice-Presidents, a Secretary-Treasurer, an Editor, a Librarian, and a General Chairman of the Examination Committee. The Council shall be composed of the active officers, nine other Fellows and, during the four years following the expiration of their terms of office, the ex-Presidents and ex-Vice-Presidents. The Council shall fill vacancies occasioned by death or resignation of any officer or other member of the Council, such appointees to serve until the next annual meeting of the Society.

Article V.—*Election of Officers and Council.*

The President, Vice-Presidents, and the Secretary-Treasurer shall be elected by a majority ballot at the annual meeting for the term of one year and three members of the Council shall, in a similar manner, be annually elected to serve for three years. The President and Vice-Presidents shall not be eligible for the same office for more than two consecutive years nor shall any retiring member of the Council be eligible for re-election at the same meeting.

The Editor, the Librarian and the General Chairman of the Examination Committee shall be elected annually by the Council at the Council meeting preceding the annual meeting of the Society. They shall be subject to confirmation by majority ballot of the Society at the annual meeting.

The terms of the officers shall begin at the close of the meeting at which they are elected except that the retiring Editor shall retain the powers and duties of office so long as may be necessary to complete the then current issue of *Proceedings.*

ARTICLE VI.—*Duties of Officers and Council.*

The duties of the officers shall be such as usually appertain to their respective offices or may be specified in the by-laws. The duties of the Council shall be to pass upon candidates for membership, to decide upon papers offered for reading at the meetings, to supervise the examination of candidates and prescribe fees therefor, to call meetings, and in general, through the appointment of committees and otherwise, to manage the affairs of the Society.

ARTICLE VII.—*Meetings.*

There shall be an annual meeting of the Society on such date in the month of November as may be fixed by the Council in each year, but other meetings may be called by the Council from time to time and shall be called by the President at any time upon the written request of ten Fellows. At least two weeks notice of all meetings shall be given by the Secretary.

ARTICLE VIII.—*Quorum.*

Seven members of the Council shall constitute a quorum. Twenty Fellows of the Society shall constitute a quorum.

ARTICLE IX.—*Expulsion or Suspension of Members.*

Except for non-payment of dues, no member of the Society shall be expelled or suspended save upon action by the Council with not more than three negative votes followed by a three-fourths ballot of the Fellows present and voting at a meeting of the Society.

ARTICLE X.—*Amendments.*

This constitution may be amended by an affirmative vote of two-thirds of the Fellows present at any meeting held at least one month after notice of such proposed amendment shall have been sent to each Fellow by the Secretary.

BY-LAWS

(As Amended November 19, 1954)

Article I.—*Order of Business.*

At a meeting of the Society the following order of business shall be observed unless the Society votes otherwise for the time being:

1. Calling of the roll.
2. Address or remarks by the President.
3. Minutes of the last meeting.
4. Report by the Council on business transacted by it since the last meeting of the Society.
5. New Membership.
6. Reports of officers and committees.
7. Election of officers and Council (at annual meetings only).
8. Unfinished business.
9. New business.
10. Reading of papers.
11. Discussion of papers.

Article II.—*Council Meetings.*

Meetings of the Council shall be called whenever the President or three members of the Council so request, but not without sending notice to each member of the Council seven or more days before the time appointed. Such notice shall state the objects intended to be brought before the meeting, and should other matter be passed upon, any member of the Council shall have the right to re-open the question at the next meeting.

Article III.—*Duties of Officers.*

The President, or, in his absence, one of the Vice-Presidents, shall preside at meetings of the Society and of the Council. At the Society meetings the presiding officer shall vote only in case of a tie, but at the Council meetings he may vote in all cases.

The Secretary-Treasurer shall keep a full and accurate record of the proceedings at the meetings of the Society and of the Council, send out calls for the said meetings, and, with the approval of the President and Council, carry on the correspondence of the Society. Subject to the direction of the Council, he shall have immediate charge of the office and archives of the Society.

The Secretary-Treasurer shall also send out calls for annual dues and acknowledge receipt of same; pay all bills approved by the President for expenditures authorized by the Council of the Society; keep a detailed account of all receipts and expenditures, and present an abstract of the same at the annual meetings, after it has been audited by a committee appointed by the President.

The Editor shall, under the general supervision of the Council, have charge of all matters connected with editing and printing the Society's publications. The *Proceedings* shall contain only the proceedings of the meetings, original papers or reviews written by members, discussions on said papers and other matter expressly authorized by the Council.

The Librarian shall, under the general supervision of the Council, have charge of the books, pamphlets, manuscripts and other literary or scientific material collected by the Society.

The General Chairman of the Examination Committee, shall, under the general supervision of the Council, have charge of the examination system and of the examinations held by the Society for the admission to the grades of Associate and of Fellow.

ARTICLE IV.—*Dues.*

The Council shall fix the annual dues for Fellows and Associates. Effective November 19, 1954, the payment of dues will be waived in the case of any Fellow or Associate who attains the age of 70 years or who, having been a member for at least 20 years, attains the age of 65 years and notifies the Secretary-Treasurer in writing that he has retired from active work. Fellows and Associates who have become totally disabled while members may upon approval of the Council be exempted from the payment of dues during the period of disability.

It shall be the duty of the Secretary-Treasurer to notify by mail any Fellow or Associate whose dues may be six months in arrears, and to accompany such notice by a copy of this article. If such Fellow or Associate shall fail to pay his dues within three months from the date of mailing such notice, his name shall be stricken from the rolls, and he shall thereupon cease to be a Fellow or Associate of the Society. He may, however, be reinstated by vote of the Council upon payment of arrears in dues, which shall in no event exceed two years.

ARTICLE V.—*Designation by Initials.*

Fellows of the Society are authorized to append to their names the initials F.C.A.S.; and Associates are authorized to append to their names the initials A.C.A.S.

ARTICLE VI.—*Amendments.*

These by-laws may be amended by an affirmative vote of two-thirds of the Fellows present at any meeting held at least one month after notice of the proposed amendment shall have been sent to each Fellow by the Secretary.

RULES REGARDING EXAMINATIONS FOR ADMISSION TO THE CASUALTY ACTUARIAL SOCIETY

1. Dates of Examination.

Examinations will be held on two successive days during the second or third week of the month of May each year in such cities as will be convenient for three or more candidates. The exact dates will be set by the Secretary-Treasurer.

2. Filing of Application.

Application for admission to examinations should be made on the Society's blank form, which may be obtained from the Secretary-Treasurer. No applications will be considered unless received before the first day of March preceding the dates of examination. Applications should definitely state for what parts the candidate will appear.

3. Associateship and Fellowship Examinations.

The examination for Associateship consists of four parts, each of which has two sections. A candidate may now write any or all sections covering Parts I and II and will receive credit for any section passed. This arrangement is restricted to Associateship Parts I and II.

A candidate may present himself for part or all of the Fellowship examinations either if he has previously passed the Associateship examinations or if he concurrently presents himself for and submits papers for all unpassed parts of the Associateship examination. Subject to the foregoing requirements, the candidate will be given credit for any part or parts of either examination which he may pass.

4. Fees.

The examination fee is $1.50 for a section, $3.00 for a complete part; subject to a minimum of $5.00. Examination fees are payable to the order of the Society and must be received by the Secretary-Treasurer before the first day of March preceding the dates of examination.

5. Credit for Examination Parts under Former Syllabus.

The new Syllabus of examinations effective in 1955 represents a considerable rearrangement of study materials. In order to simplify the process of transition and assure maximum equity among candidates, the following procedure has been established:

A candidate who has passed, or been credited with, one or more parts of the Associateship or Fellowship examinations under the Syllabus effective in 1948 and/or the Syllabus effective in 1953 will receive credit for the corresponding parts of the new Syllabus in accordance with the following table:

Parts Passed or Credited Under Old Syllabus (Effective in 1948 and/or 1953)			*Parts Credited Under New Syllabus (Effective in 1955)*		
Associateship,	Part	I	Associateship,	Part	I (a) and II (b)
"	"	II	"	"	III
"	"	III	"	"	I (b) and II (a)
"	"	IV	"	"	IV
Fellowship,	Part	I	Fellowship,	Part	IV
"	"	II	"	"	II (a) and III (a)
"	"	III	"	"	I (a) and III (b)
"	"	IV	"	"	I (b) and II (b)

Partial examinations will be given to those candidates requiring them in accordance with the foregoing credits.

6. Waiver of Examinations for Fellowship:

The examinations for Fellowship will be waived under Article III of the Constitution in part or in whole for those candidates who meet the qualifications and requirements set forth below.

1. WAIVER OF FELLOWSHIP PARTS III AND IV

(a) The candidate shall present himself in the same year for Fellowship Parts I and II, or shall have previously passed Parts I and II.

(b) The candidate shall present an original thesis on an approved subject relating to insurance (other than life insurance). Such thesis must show evidence of ability for original research and the solution of advanced insurance problems comparable with that required to pass Fellowship Parts III and IV. The thesis shall be of a character which would qualify it for printing in the Proceedings.

(c) Candidates electing this alternative should communicate with the Secretary-Treasurer and obtain through him approval of the Committee on Papers of the subject of the thesis and also of the thesis. In communicating with the Secretary-Treasurer, the candidate should state, in addition to the subject of the thesis, the main divisions of the subject and the general method of treatment, the approximate number of words and the approximate proportion to be devoted to data of an historical nature. All theses shall be in the hands of the Secretary-Treasurer before the examinations are held in May of the year in which they are to be considered. No examination fee will be required in connection with the presentation of a thesis.

2. FULL WAIVER

(a) The candidate shall have completed twenty years as an Associate member of this Society.

(b) The candidate shall present an original thesis on an approved subject relating to insurance (other than life insurance). The thesis shall be of a character which would qualify it for printing in the *Proceedings*.

(c) Candidates electing this alternative should communicate with the Secretary-Treasurer and obtain through him approval by the Committee on Papers of the subject of the thesis and also of the thesis. No examination fee will be required in connection with the presentation of a thesis.

7. Waiver of Examinations for Associateship.

The examinations for Associateship will be waived under Article III of the Constitution in part or in whole for those candidates who meet the qualifications and requirements set forth below.

1. PARTIAL WAIVER

Associateship Part I will be waived for a candidate who has passed Parts 1, 2 and 3 of the examinations of the Society of Actuaries.

2. FULL WAIVER

(a) The candidate shall be at least thirty-five years of age.

(b) The candidate shall have at least ten years' experience in actuarial or statistical work in insurance (other than life insurance) or in a phase of such insurance which requires a working knowledge of actuarial or statistical procedure or in the teaching of the principles of insurance (other than life insurance) in colleges or universities.

(c) For the two years preceding date of application, the candidate shall have been in responsible charge of the actuarial or statistical department of an insurance organization (other than a life insurance organization) or shall have occupied an executive position in connection with the phase of insurance (other than life insurance) in which he is engaged, or, if engaged in teaching, shall have attained the status of a professor.

(d) The candidate shall have submitted a thesis approved by the Committee on Papers. Such thesis must show evidence of analytical ability and knowledge of insurance (other than life insurance) sufficient to justify waiver of examinations.

(e) Refer to Paragraph 1 (c) of Rule 6 for details of submission.

LIBRARY

All students registered for the examinations of the Casualty Actuarial Society and all members of the Casualty Actuarial Society have access to all the library facilities of the Insurance Society of New York and of the Casualty Actuarial Society. These two libraries, with combined operations, are located at 107 William St., New York 38, New York and are under the supervision of Miss Ruby Church.

Registered students may have access to the library by receiving from the Society's Secretary-Treasurer the necessary credentials. Books may be withdrawn from the library for a period of one month without charge. The Insurance Society is responsible for postage and insurance charges for sending books to out of town borrowers, and borrowers are responsible for the safe return of the books.

Address requests for books to:

Librarian
Insurance Society of New York
107 William St.
New York 38, New York

SYLLABUS OF EXAMINATIONS

(Effective with 1955 Examinations)

ASSOCIATESHIP

Part	*Section*	*Subject*
I	(a)	Statistics.
	(b)	Probability.
II	(a)	Elementary Life Insurance Mathematics.
	(b)	General Principles of Insurance; Insurance Economics and Investments.
III	(a)	Insurance Law; Supervision, Regulation and Taxation of Insurance.
	(b)	Social Insurance.
IV	(a)	Policy Forms and Underwriting Practice.
	(b)	General Principles of Rate-making; Credibility.

FELLOWSHIP

I	(a)	Determination of Premium, Loss and Expense Reserves.
	(b)	Insurance Expense Analysis and Accounting.
II	(a)	Individual Risk Rating.
	(b)	Advanced Problems in Underwriting and Administration.
III	(a)	Machine Methods.
	(b)	Advanced Problems in Insurance Statistics.
IV	(a)	Advanced Problems in Rate-making.
	(b)	Current Insurance Problems.