

AUTOMOBILE INSURANCE  
CANADIAN ACCIDENT-FREE CLASSIFICATION SYSTEM

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Canada

1. The precise wording of the heading is deliberate. The Canadian system is not a "bonus" nor is it properly described as "no claim"; it is a sub-classification of insureds according to whether they have been *accident*-free during a term of years ending at the inception of the insurance period. Specific rates are quoted in the Tariff for each sub-class, based broadly on the relative experiences; as a matter of arithmetical convenience, premium rates are calculated by applying discounts or surcharges to a "key" rate, but the percentage discounts or surcharges are not quoted in the Tariff, the Policy or the renewal papers.

2. In the early 1930's a "no claim bonus" on British lines was part of the Canadian automobile insurance system. A percentage reduction or "bonus" was allowed from the premium specified in the Policy, provided the insured had owned and operated a private passenger car, free of accident or revocation of driving license, for a period of up to three years before the inception of the Policy. At that time the Automobile Insurance Market was profitable and highly competitive, both as between Companies and as between Agents. Because of inter-Company competition, confirmation of entitlement to the bonus was rarely attempted. Often it was not possible, as most Companies did not maintain an alphabetical index of insureds; an effort to set up an inter-Company claim-recording bureau broke down through sheer weight of numbers of claims.

Agents realised the impossibility of checking entitlement to no-claim bonus; inter-Agent competition soon resulted in the bonus being granted in virtually all cases, irrespective of justification. There had at all times been a tendency to modify the "no-claim" qualification into a "no-blame" qualification which further weakened a very shaky system. In 1937 it was recognised that the system had completely broken down and it was discontinued.

3. In the years immediately following 1945, the number of cars on the roads increased very rapidly—much faster than the roads were improved to take them. Post-war cars were bigger and faster than pre-war models; on average, their drivers were younger and, perhaps, less mature. The frequency of claim rose materially. So, because of inflation, did the average cost per claim. The result was a rapid increase in the cost of Automobile Insurance; premium rates necessarily followed. Public disapproval of increasing premiums was clamant and continuous; severe political pressures built up, and one Provincial Government entered the Automobile Insurance field on terms which existing insurers felt represented unfair competition.

4. Criticism was directed, more perhaps than anything else, at the failure of the Insurance Companies to differentiate, rate-wise, between the more and the less responsible sections of the driving public. John Doe, who had been accident-free, considered he had not contributed in any way to the increasing loss cost, and resented having to pay the same premium as his next door neighbour who had, he knew, had one or more recent accidents. Individual insurers' efforts to differentiate by the use of ad hoc surcharges were frustrated by the intervention between insurer and insured of an agency force, many members of which were concerned only with getting the business written on terms satisfactory to their insureds; these used their status as "independent contractors" to play off one Company against another, with little regard for the experience of the Companies they represented.

Attempts during the late 1940's to reintroduce the principle of a no-claim bonus met strong opposition from insurers with memories of the post-war fiasco. On the other hand, efforts to raise the general rate level to a point at which the insurer of an average portfolio would be able to operate profitably, were resisted, because of the fears both of overwhelming public criticism and Government intervention, and of the competitive advantage which higher rates gave to the minority of highly selective insurers who were taking the cream of the business.

5. In 1952-3 a strenuous endeavour was made to put Automobile Insurance on to a more satisfactory basis, with a reduction in agents' commission and Company administrative expense al-

lowance and an adequate provision in the rate level for anticipated loss cost. The opportunity was taken to introduce the principle of "accident-free rating" to a restricted extent. Those insureds with private passenger cars, used for pleasure purposes only, and with no driver in the insured's family under 25 years of age, were allowed a 20% discount from the premium for the Third Party Liability section of their Policies, provided they had had no accidents in the three full years preceding the year of insurance for which the discount applied.

The limitation to the Third Party section of the over-all coverage was possible because separate premiums were quoted for the Third Party Liability, Collision, and Fire & Theft (including miscellaneous perils) sections of the coverage. (It was not uncommon for the insured to carry only one or two out of the three coverages, or, alternatively, to place them with different insurers; in particular, it was quite common for the Third Party Liability to be covered with one insurer, and Collision and Fire & Theft, etc., with a different one). The limitation to private passenger cars, used for pleasure purposes only and with no driver under 25, restricted the field of the special discount to what was known to be the most select class of business which was already written at premium rates less than the average of all private passenger car rates in accordance with the experience of the class. The discount of 20% was more or less arbitrary; it was the same as the maximum discount permissible under the pre-war scheme, but it was not known whether it would be justified statistically by the experience of the subclass thus created, nor was there anything more than the crudest of estimates of the proportion of insureds who would be properly entitled to claim the discount. No intermediate classes were introduced at this stage. No attempt was made to "compensate", i.e., to recover, from those insureds not entitled to the discount, the premium income which would be lost by reason of it. Insurers had been losing money on their automobile insurance portfolios, and with the general reorganisation of the automobile insurance market, of which the introduction of accident-free rating only formed a part, believed that failure to "compensate" for the discount would not leave them any worse off.

6. The introduction of an accident-free class was so well re-

ceived this time by everybody concerned with the problem of Automobile Insurance—Governments, the insuring public, the Companies and their Agents—that there seemed every justification for extending it, at any rate to the Collision coverage for the same select class (i.e., insureds using their vehicles for pleasure purposes only, with no driver under 25 in the family), subject to the same qualification, namely, a three-year accident-free record. A suitable opportunity showed itself, and this extension was made, again without any attempt to compensate for the loss of premium income. Fortunately, the claim frequency, which had been rising steadily in the post-war years, turned downwards in 1953 so that a rate level which included an uncompensated accident-free discount proved to be generally adequate. Even if it had not, it is believed insurers in general would have accepted the cost of the uncompensated discount as being justified by the improvement in relations with Governments and the public which resulted from its introduction.

7. The initial, restricted, accident-free classification included rather less than half of all private passenger car insureds and applied to about 40% of the premium income for the Third Party (and, later, Collision) coverage for the private passenger class. Restriction of the principle to the select class, however, left a substantial body of insureds, with accident-free records, getting no recognition of those records because they were not themselves in the select class. There seemed no reason to withhold corresponding recognition in those cases, particularly for the relatively large class of "family car" insured who was not in the select class because of the existence of a driver under the age of 25 in the family; past freedom from accidents in this class seemed likely to be a satisfactory criterion for separating the more responsible from the less responsible of these insureds also. On this reasoning, and still without *statistical* justification, the accident-free sub-classification was extended in 1954 to all other classes of private passenger vehicle (except those owned or principally operated by under 25s) and to commercial vehicles, in both cases with the exception of fleets of five or more vehicles under common ownership and management which had at all times been subject to a measure of experience rating under a "Fleet-rating Plan".

Originally any accident history was a disqualification for accident-free status, both for the Third Party *and* Collision coverages, even though the accident concerned only involved liability under one of the coverages (e.g., "Collision" with the insured's own gate post). It was quickly realised that this encouraged the placing of the separate coverages with different insurers, at an over-all increase in administration expense. The scheme was changed so that accident-free status should be established for the two coverages independently, on the basis of their respective "accident" histories; an insured may therefore be in one accident record sub-class for the Third Party coverage and a different one for Collision.

8. The first statistics relating to the experience of the accident-free sub-classes emerged in time for consideration of the 1955-rate programme. They were far from reliable, but they suggested that the 20% discount was justified, and in 1955 the accident-free sub-classification was extended also to private passenger vehicles owned or principally operated by under 25s.

By 1956 more reliable statistics had emerged, which indicated that a discount higher than 20% appeared to be justified by the relative experience of the accident-free sub-classes and the remainder of the experience. The discount for three years' accident freedom was increased to 25%, and an intermediate class based on two years' accident freedom was introduced at a 15% discount. In 1957 the three-year discount was increased to 30%; the two-year discount to 20%; and another intermediate class, based on one year's accident freedom, was introduced at a 10% discount. In 1958 the three-year accident-free discount was increased to 35% for private passenger cars only, and in 1959 that for commercial vehicles was brought up to the same figure.

All changes made subsequent to 1953 (i.e., all changes except the initial restricted sub-classification and its extension to the Collision coverage) were compensated for by appropriate adjustments to the over-all rate level, although a high degree of accuracy in the compensation was not attempted.

9. During this period changes were also being made in the major classifications, but the reasons for these changes, their statistical justification and the effect on the general rate level, are outside the scope of this memorandum. At the present time there are five

private passenger car classes, 1 to 5, each of which is divided into four sub-classes—A - three-year accident-free; X - two-year accident-free; Y - one-year accident-free; B - recent accident record. Thus, there are 20 sub-classes for private passenger vehicles, increased to 24 by a subdivision of Class 3 to cover business-use vehicles with no driver under 25, which number is almost doubled by a special discount allowed to farmers. All types of commercial vehicles are subdivided into the same four accident-record classes. The full definitions of these various classes as at June 1959 are given in the Tariff. Exhibit "A" gives an extract from the Tariff rate sheets, for private passenger cars only, showing the premiums for Third Party Liability insurance for "standard" limits (Bodily Injury \$ 10,000 any one person; \$ 20,000 any one accident; Property Damage \$ 5,000 any one accident) and \$ 100 deductible Collision insurance, for a rating territory comprising the cities of Montreal and Quebec and the surrounding suburban areas, one of the more highly rated territories in Canada. The definitions are self-explanatory, but the difference between the private passenger requirement, for A rating, of a permit to drive held for the past three years, and the corresponding requirement, for a commercial vehicle, of ownership of a commercial automobile for the past three years, may be mentioned. The difference is necessary because many commercial vehicles are not driven by the insured but by employees, and frequent changes of employee make it impossible to base the classification on any individual's driving record; the accident-free status of the insured as owner is used instead. The "Rating Group" in the Collision coverage depends on the make, model and price of car concerned.

10. It will be realised from the foregoing explanation of the introduction of the accident-free classification system that some of the early steps, in particular, were taken without any clear statistical justification, but on the basis of the judgment of the responsible committees. However, as statistics of a lesser or greater degree of credibility emerged, the earlier decisions were reviewed, and, in general, the classification system was extended, both in scope and in amount of discount. The changes in the classification plan meant that the available statistics always lagged behind the development of the plan; even to-day only one year's statistics are

in existence, for which the subdivisions bear a reasonable resemblance to the sub-classes of the rating system. The principal source of Automobile Insurance statistics in Canada is the collation made on behalf of the Association of Superintendents of Insurance of Canada. Virtually all insurers—whether Tariff or Non-Tariff—contribute to this experience; submission is a statutory requirement in certain Provinces, but is voluntary in others. The analysis is made on a Policy-year basis, and the results are presented in a form which facilitates the adjustment of premium rates for the various rating territories. Separate statistics for the various sub-classes, however, are only presented for Canada as a whole. It has been felt that the subdivision of these statistics for individual rating territories would seriously affect their credibility; might easily produce anomalous results; and, through the very wide dissemination amongst Provincial Government Officials and Legislators of the results of the analysis, might lead to ill-informed but still irksome criticism of what were in fact sound decisions.

Admittedly, the aggregation of statistics drawn from a number of rating territories, with widely different conditions as to density of traffic, road construction, climate, etc., introduces the dangers of heterogeneity into the emerging tabulation. This is particularly apparent in the case of the Collision experience, where there is an additional source of heterogeneity in the aggregation of statistics for contracts with different deductibles, e.g., \$ 50, \$ 100, \$ 250; it is known that the sale of the relatively expensive \$ 50 deductible cover is much more common in low-rated territories, insureds in the higher-rated territories reducing their over-all insurance cost by taking \$ 250 deductible cover only. For this reason it has always been accepted that the sub-class statistics of the Third Party coverage were more reliable than those of the Collision coverage, and, in general, decisions as to the discounts for the various accident-free classes have been based on the Third Party statistics, although markedly contra indications of the Collision statistics (happily rare) have not been ignored.

Therefore it is suggested that the efficacy of the accident-free classification should be judged by the following statistics relating to the Policy-year commencing in 1957 and running until the expiry of that Policy-year or until the 30th June 1958:

## THIRD PARTY CLAIM FREQUENCY PER 100 CAR YEARS INSURED

*(Canada-wide—excluding "Fleet-rated" Vehicles)*

Accident-Free status	Private Passenger Class					Commercial
	1	2	3	4	5	
A	7.8	12.1	12.7	15.1	10.3	8.2
X	10.4	15.0	16.8	18.4	11.5	13.9
Y	11.7	15.4	17.3	17.0	12.1	15.2
B	14.0	16.3	19.9	21.3	14.7	20.5
Total Car Years exposed	1,534,166	75,655	158,666	127,066	29,304	344,559

The statistics can be re-grouped to produce the following:

## THIRD PARTY COVERAGE

Accident-Free status	Private Passenger Cars			Commercial Vehicles		
	Car Years Exposed	Number of Claims	Claim Frequency	Car Years Exposed	Number of Claims	Claim Frequency
A	1,548,724	135,775	8.8	265,041	21,778	8.2
X	77,726	9,403	12.1	13,782	1,913	13.9
Y	102,415	13,343	13.0	20,939	3,180	15.2
B	195,992	31,000	15.8	44,797	9,170	20.5
Total	1,924,857	189,521	9.8	344,559	36,041	10.5

The claim frequencies can be expressed as percentages of the claim frequency for the "B" sub-class and compared with the discount percentages actually applied in the current rate programme.

## THIRD PARTY COVERAGE

Accident-Free status	Claim Frequency % of "B" Class Frequency		% used in Rate Programme
	Private Passenger Cars	Commercial Vehicles	
A	56%	40%	65%
X	77	68	80
Y	82	74	90
B	100	100	100



As judged by the one year's experience (even after allowance has been made for the possible effect of heterogeneity), the discounts incorporated in the current rate programme are eminently justified and it would be possible to go further. However, conclusions from one year's experience have to be modified in the light of what is known, albeit in considerably less detail, of the experience of previous years, presentation of the data for which would over-lengthen this memorandum. The committees responsible for developing the rate programme have always paid attention to the whole of the available information and have also taken into account certain of the administrative factors which may now be considered.

11. The most important question to be asked about any rating system is "Does it work?". If the answer to that question is satisfactory, then *precise* statistical justification and mathematical accuracy become of minor importance. At the time the present accident-free rating system was introduced into Canada, there was a general, if not very coherent, public demand for something of the sort, and the introduction of the system, even on the restricted initial basis, was welcomed. Subsequent extensions have been made gradually, having regard both to what could be learnt from the statistics as they emerged; to the experience of insurers and agents in administering the system; and to public reaction to the successive changes. The statistics have clearly justified what has been done. The application of the system as a method of classification, with detailed rules producing fairly sharp distinctions between sub-classes, has enabled tariffs to be produced which avoided intricate calculations in Company or Agents' offices. The public has welcomed the recognition of the responsible driver, with responsibility being proved by results. There have been minor administrative difficulties (for example, a plea for the acceptance of trivial claims without sacrifice of accident-free status) but these have been easily overcome.

The use of the same differentials, country-wide, at easily understandable round figures has seemed reasonable, and no one has shown any disposition to be so critical of statistical or mathematical accuracy as to hamper the respective committees in the exercise of their judgment on how the system should develop.

The possibility of the scheme breaking down because of wide-

spread "cheating" on the part of the public or the agents was always recognised, particularly in view of the pre-war failure. The last ten years, however, have been years during which Automobile Insurance has been generally unprofitable. Companies have not been disposed to over-aggressive competition, and agents have been too anxious to retain their existing Company connections to risk passing business to the Companies in connection with which misrepresentations might have been made. At the present time "cheating" is thought to be a minor factor. Should the time come when Automobile Insurance is generally profitable, the scheme will face a more severe testing period, but the strain should not be too great unless the apparent profit margin becomes larger than any that seems likely, in the light of the continual scrutiny of Automobile Insurance rates, by or on behalf of the public.

Further increases in discounts or the introduction of additional more preferred classes, based, perhaps, on longer accident-free periods, may have to be considered, but it must be recognised that the greater the advantage accruing to the insured from a concealment of fact, the greater the temptation to "cheat". Further, the penalty for one claim is severe now, and it might be that any greater advantage to the accident-free would have to be accompanied by a modified penalty for the isolated accident—which is known to be a feature of some no-claim bonus schemes.

**12.** Four points should be stressed:

(a) It is a statutory requirement in Canada that a copy of the application, with the insured's answers (or alleged answers) to questions relating to accident history, should form a prominent part of the Policy itself. This has undoubtedly been of value in preventing an insured's taking too lightly his responsibility in completing the form—and has avoided Policies being issued without any application form being completed or being seen by the insured.

(b) The incorporation of the accident-free rating scheme as part of the classification system, rather than as a bonus or discount from a basic premium, has simplified the application of the scheme at all stages.

(c) The gradual introduction and extension of the scheme has enabled it to be modified easily as circumstances required, and has been of great value in ensuring its orderly acceptance by the public and by the Industry.

(d) The scheme has enabled the Insurance Industry to give worthwhile recognition to those insureds whose records justify it; it may not have achieved precise equity but it has provided rough justice, and it has worked. To all appearances it is now a permanent part of the Automobile Insurance system in Canada.

EXHIBIT A  
QUEBEC—TERRITORY A  
*Private Passenger Car Premiums*

Class	Third party \$M. 10/20/5	Collision—\$ 100 deductible				
		Rate group				
		1	2	3	4	5
	\$	\$	\$	\$	\$	\$
1 A	58	46	55	69	85	105
X	71	56	68	85	105	129
Y	80	63	76	96	118	146
B	89	70	85	107	131	162
2 A	95	76	91	114	140	173
X	117	93	112	141	173	213
Y	132	105	126	158	194	240
B	147	116	140	176	216	267
3 A	95	76	91	114	140	173
X	117	93	112	141	173	213
Y	132	105	126	158	194	240
B	147	116	140	176	216	267
4 A	139	137	165	208	255	315
X	171	169	203	256	314	388
Y	192	190	229	288	353	437
B	214	211	254	320	393	485
5 A	95	76	91	114	140	173
X	117	93	112	141	173	213
Y	132	105	126	158	194	240
B	147	116	140	176	216	267