

PANEL DISCUSSION – NOVEMBER 1964 MEETING
MOTOR INSURANCE IN FOREIGN COUNTRIES

Moderator: NORTON E. MASTERSON

One of the features of the Casualty Actuarial Society's Fiftieth Anniversary celebration in November 1964, was a panel discussion on Motor Insurance in Foreign Countries by five noted European actuaries. Taking part, in alphabetical order by country, were Messrs. Edward Franckx of Belgium, B. Christoffersen of Denmark, Robert E. Beard of England, Karl Borch of Norway, and Hans Ammeter of Switzerland. Mr. A. Tröblicher of the German Federal Republic did not attend the meeting but he sent a paper and it is included below. Norton E. Masterson, Past President of the Society and currently Vice Chairman of ASTIN, was Moderator.

Participants in the discussion were requested to organize their remarks around ten specific aspects of motor car insurance in their respective countries, as follows:

1. Extent of compulsory coverage
2. Ratemaking
3. Authority of government over coverage and rates
4. Determination of claim liability
5. No-claim bonus schemes
6. Hit-and-run coverage
7. Reinsurance of large losses
8. Uninsured motorists coverage
9. Typical passenger car rates
10. Significant variations from U. S. automobile insurance.

EDWARD FRANCKX – *Belgium*

Mr. Franckx is head of the Department of Mathematics in the Royal Military College of Belgium and a member of the Royal Association of Belgian Actuaries. Also he is currently President of the Permanent Committee of the International Congress of Actuaries. He was founder of ASTIN and is now Honorary Chairman.

COVERAGES

Third party liability insurance has been obligatory, for all types of motor vehicles, since 1957. Previously it had been required for public and commercial vehicles; in 1957 it became obligatory for motorcycles and private passenger cars.

Policies sometimes include, in addition to third party liability insurance, one or more of the following coverages:

- Defense in court (*contre-assurance spéciale*),
- Fire and theft of the vehicle,
- Material damage to the vehicle caused by accident.

The obligatory liability insurance provides unlimited coverage except for material damage caused by fire or explosion where coverage is obligatory only up to 5 million francs (about \$100,000).

Most policies are written for a term of 10 years, a discount of 10% being generally granted to insureds who subscribe for that term.

SOME FIGURES RELATING TO OBLIGATORY LIABILITY INSURANCE

In 1963 the make-up of total registered vehicles was:

Private passenger cars	874,000
Motorcycles (including motorized bicycles)	632,000
Light or heavy trucks – transport of goods for own account	319,000
Light or heavy trucks – transport of goods for others	23,000
Buses and motor coaches	7,000
Taxicabs	9,000
Total	<u>1,864,000</u>

One hundred forty-one companies, eighty-two Belgian and fifty-nine foreign, share the Belgian market.

Premium income from 1963 operations amounted to 4,929 million Belgian francs (\$98.6 million). It was made up of:

	<u>Millions F.B.</u>
Private passenger	2,945
Motorcycles	287
Transport for own account	1,233
Transport for others	314
Buses and motor coaches	102
Taxicabs	48
Total	<u>4,929</u>

Losses incurred in 1963 amounted to approximately 3,784 million F. B. (\$75.6 million).

After taking into account general expenses which amount to approximately 15% of income and agents' commissions of approximately 20%, it becomes obvious that total expenses cannot be met out of premium income.

THE FINANCIAL SITUATION

The financial situation is therefore difficult as it is in many countries. The inadequacy of premium income results in a great measure from the inadequacy of tariff rates. Negotiations are in progress with the Minister of Economic Affairs, who has jurisdiction over the regulation of insurance and over price control, in an attempt to obtain authorization for higher tariffs.

But premium inadequacy is also caused to a considerable extent by the play of competition, often unhealthy, which manifests itself in three ways:

- (a) using inadequate rates
- (b) granting large and unwarranted discounts from current rates
- (c) finally, too often, allowing excessively high rates of commission in order to hold agents.

RATE STRUCTURE

Private passenger: Two or three years ago many companies adopted "personalized" rates. Premiums are a function not only of the cubic capacity of the engine but also of the type of use (business or pleasure) and of the driver's occupation. Some companies retain cubic capacity of the engine as the only criterion, and among these are some who adjust the premium retrospectively by a bonus for no accidents.

Motorcycles: Cubic capacity of the engine is the only criterion generally used.

Transport of objects: Cubic capacity of the engine and tonnage both enter into the determination of the premium.

Passenger transport: The number of seats determines the amount of premium.

STATISTICAL NOTE

The continuing deterioration of underwriting results has caused great and widespread concern over this line of insurance for several years. There is an organization in Belgium called STATAU (Statistiques Automobiles) which collects information from its member companies and in their behalf

compiles the data needed for determining average loss costs and accident frequencies and calculating pure premiums. But the competitive situation is such that far too little use is made of the indications STATAU supplies.

B. CHRISTOFFERSEN – *Denmark*

Mr. Christoffersen is Managing Director of the Baltica Life Insurance Company of Copenhagen. He is a member of the Danish Association of Actuaries and of ASTIN.

In order to give you an idea of certain local dimensions which may serve to illustrate certain of the points which I am going to mention later on, I would state, by way of introduction, that Denmark covers an area of about 43,000 square kilometres (16,500 square miles) and has a population of about 4.8 million inhabitants distributed over 1.6 million households. Of these households every fourth or fifth owns a motor car, and also in Denmark the development goes towards there being more than one motor car in a number of households. The total number of motor cars, including tractors and mo-peds (motor bikes), is today 1.5 million and they represent a premium income of roughly 500 million Danish kroner or \$70 million under third party insurance and insurance covering physical damage to the car.

The first Danish legislation on motor cars dates back to the year 1903. When perusing the rules laid down in this our first act on the subject, one is invariably stricken by surprise at the rapid development since then. Article 28 of this Act laid down that in case of collision with a motor car or in case of wayfaring horses shying at the motor car resulting in injury to persons or damage to property, the person responsible for the motor car should make good the damage. The liability could, however, lapse or be reduced if the injured person had himself intentionally or by gross negligence caused the damage, or circumstances showed that the damage could not have been avoided by the prudence and diligence which the driver of the motor car is required to apply. The wording of this Article is in all essentials identical with the present provision of the Road Traffic Act, i.e., that the onus of proof rests with the person in charge of the motor car, or as the saying goes that the principle of the "inverted onus of proof" was already then valid. Article 19 of the same Act lays down: If the motor car has to pass other road users, driving or riding in front of him, the signalling apparatus should be used in due time and the motor car be kept properly to the left side of the street or road. If the other driver signals to the driver of the motor car, the latter is obliged to stop the motor car

to await whether any safety measures are necessary, such as alighting or drawing aside. If no such measures are taken, the driver of the motor car is entitled to continue. During the actual passing, the signal horn must not be used and the speed must not exceed what is necessary to pass. If the driver of the motor car encounters persons driving or on horseback, the motor car driver shall keep as much as possible to the right of the road or the street, and it is further incumbent on him to stop the vehicles and the engine (so that no sound is produced) when the other driver or rider makes sign to him or he himself perceives that the horse or horses show sign of taking fright. The driver or horseman shall leave a passable stretch of the road to the driver of the motor car.

From the same period came rules from the Police Regulations to the effect that a driving speed of four Danish miles an hour (about 18 U.S. mph), can be permitted on stretches of roads which are highroads and which belong to the grounds of Copenhagen (Frederiksberg) or a market town or market place. The speed of driving in any other case must not exceed two Danish miles an hour (about 9 U.S. mph).

This first Act on Motor Cars contained no provision dealing with compulsory third party liability insurance. The rules relating to this subject were introduced in 1918, and the maximum amount of compensation according to the insurance was D.kr. 12,000 for motor cars corresponding to about \$4,000 based on the rate of exchange prevailing at the time.

In the following the rate of exchange ruling today has been applied. Rate of exchange and purchasing power are not identical. The purchasing power of the Danish krone in Denmark in relation to dollars is roughly 30% to 40% higher than the amount indicated by the rate of exchange. In 1921 the amount of compensation was increased to D.kr. 20,000 (about \$3,000), in 1927 to D.kr. 30,000 (about \$4,300) and in 1950 to D.kr. 60,000 (about \$8,500).

The Act presently in force was adopted in 1959. Amendments were required partly to bring the Act up-to-date in relation to the compulsory insurance cover and partly in an endeavor to attain uniformity in the rules of the Scandinavian countries on the basis of the work of a Scandinavian Committee. Such a uniformity was indeed realized in most respects, but on one important point the Danish legislation still differs from that of the other Scandinavian countries: Denmark has retained the rules of the onus of proof resting with the driver of the motor vehicle whereas objective liability was introduced in the other countries. According to the latest amendments, the amounts of cover were fixed at D.kr. 150,000 (just under

\$22,000) per person injured or killed without limitation of the number of injured persons. As far as damage to property is concerned, the insurance cover was fixed at a minimum of D.kr. 60,000 (just under \$10,000), but the latter cover has in certain cases proved inadequate, and it is therefore to be expected that the minimum amount of insurance protection in this regard will be increased.

To the Danish insurance companies the revision of the Act implied a most important increase in the companies' commitments on the individual insurance, and it was therefore natural for the companies simultaneously to investigate how they could obtain the simplest, least costly and most effective reinsurance protection.

A considerable number of companies working on the same tariff basis (members of the Danish Association of Motor Vehicle Insurers) solved the problem by establishing a Catastrophe Pool, the conditions of which are briefly that the individual company for its own account covers D.kr. 100,000 (upwards of \$14,000) of damage arising out of the same event. Amounts in excess thereof, up to a sum of D.kr. 2,000,000 (just under \$300,000), are distributed over the participating companies on the basis of their premium income in the preceding year in motor car business. Any other amount relating to claims resulting from the same event and exceeding D.kr. 2,100,000 (\$300,000) is covered by way of an excess of loss arrangement. A few minor companies cover part of the first D.kr. 100,000 (\$14,000) by a quota share reinsurance.

In Denmark the duty levied on private motor cars is very high. The size of this duty, which to a certain extent varies with the value of the motor car, may roughly be stated as being equal to the selling price of the motor car before the levy of said duty, i.e., about 100% on the price of a new car. The yearly duty will vary from \$10 for the smallest to about \$30 for the bigger cars. Gas would cost about 60 cents a gallon, about 60% of which is duty.

This naturally results in the price of a motor car, new or second-hand, being rather high, which in turn entails that a considerable percentage of the total number of cars, about 80%, is insured against damage to the car. However, in the following I will in the main confine myself to compulsory third party insurance. The premiums payable for this type of insurance are fixed on the basis of the following criteria: (a) use of the vehicle, and (b) the place of registry of the vehicle. By way of statistics it has been established that these two criteria provide sufficient differentiation with regard to the mileage driven and the density of traffic in the area in which

the vehicle is chiefly used. By way of illustration, the following categories may be mentioned: motor cars for private use, motor cars used commercially, taxicabs, transportation of light goods for own account and for the account of others, transportation of heavy goods – the last-mentioned category being further sub-divided: “for own account,” “for the account of others,” etc. The geographic areas are: a) Copenhagen with suburbs and surrounding districts; b) major provincial towns; c) minor provincial towns; d) rural districts.

With regard to insurance against damage to the car a further criterion is added to the tariff. Until recently, the value of the vehicle at the moment the policy was taken out was the decisive factor, but as that criterion led to frequent adjustments owing to the depreciation of motor vehicles, it was decided – when the tariff was last amended two years ago – instead of using the value of the vehicle as a basis, rather to divide the insured vehicles into different classes according to their net weight, subject however to a limitation of value for the individual class; in consequence, the premium payable for insurance against damage to the car is a fixed amount irrespective of the age and value of the insured motor vehicle.

So far, this division into groups only applies to private motor cars and light vans whereas it has not been possible to apply the same system to heavy vans and lorries.

Incidentally, the Association of Danish Motor Vehicle Insurers, to which the majority of Danish companies adhere, works out statistics based on particulars received from the individual company.

From the preceding remarks it appears that in Denmark there is a legal obligation to arrange insurance up to the minimum cover mentioned, but this does not necessarily imply that the liability to pay damages may not exceed the insurance amounts. However, the Danish law regulating the question of damages operates very largely with a concept designated “middle-class average,” which means that the Courts when assessing damages to an injured person either do not all, or only to a very slight degree, take into account the claimant’s income, so that, as far as I know, it has never yet happened that the insurance amount has been insufficient in case of injury to persons whereas the cover for damage to property has proved inadequate in two or three cases.

With regard to the fixing of premiums, the rule is that the rates of premium are not subject to the approval of the insurance supervision, in this case the Danish Insurance Board, but the companies are obliged to submit their tariffs by way of information to the supervisory authorities.

As regards the question of cartels and the fixing of premiums we do have a special law on these subjects in Denmark (the Supervision of Monopolies). As far as the insurance industry is concerned, this supervision is also carried out by the Insurance Board. It is incumbent on the companies to report to the Supervision of Monopolies all agreements which are estimated to have a restrictive effect on the competition. This rule applies also to the tariff agreements made under the auspices of the Danish Association of Motor Vehicle Insurers. In actual fact, the supervision relating to the fixing of prices, which as mentioned above has also been referred to the Insurance Board, is exercised by this Authority in the way that measures are only taken if the Insurance Board estimates that the existing tariffs do not furnish sufficient elements of competition.

The vast majority of the claims are settled by the companies without intervention by the authorities. The police even go so far as to request the companies not to ask for a police report in case of damage, provided only damage to property is involved and the claim is not estimated to exceed about D.kr. 3,000 (\$400).

Further, the large majority of the Danish companies have joined a convention to the effect that they undertake not to exercise any right of recovery against the company having insured the vehicle causing the damage, to the extent of the first D.kr. 5,000 (\$700) for any one loss or damage. In case of grave injury to persons or heavy offenses against the Road Traffic Act, the police will always be called upon to take a statement and the question of blame will be settled by the Courts. In such cases, also the amount of damages will generally be fixed either in the Police Court or in the course of an ensuing civil action.

There is in Denmark a certain company, a dairies and farmers mutual, which writes motor car insurance at a fixed premium and without no-claim bonus, but the majority of companies have adopted the following bonus systems:

Following one year of no claims, the premium will be reduced from 100% to 75%, and if the subsequent year is also free of claims, the premium is further reduced to 60%. In case of claim the premium is increased, irrespective of whether the damage occurred in the first or second year, so as to correspond to the initial premium.

The system is complicated by the fact that in order to counter the competition from the company operating with a fixed premium, a new insured is permitted to start in bonus category No. 2, i. e., he is only

charged 75% of the maximum premium, which in turn results in the insured remaining in category No. 2 for two years.

There is special coverage for "hit and run" claims in case of personal injury; we have been having a few such cases in recent years. Both police and courts follow a very severe course in such cases, of which so far none has remained unsolved. When such cases are cleared up, the Pool has a right of recovery against the company who has insured the vehicle causing the damage, and the company has a similar right against the person responsible for the damage. Claims remaining unexplained will be apportioned to all companies operating in Denmark proportionally with their premium income.

It is very rare for a motor vehicle not to be properly insured, but such claims as might arise in connection with uninsured driving are covered by the companies according to an apportionment similar to that described in connection with "hit and run" coverage.

The schedule below shows the premiums for third party liability insurance, and for third party liability plus full insurance for damage to the car, in the four tariff areas and for cars of four different weights, before application of the no-claim bonus. The premiums are in Danish kroner and may be converted to dollars at a rate of 7 D.kr. for one dollar.

Type of Motor Car and Weight	Cover	Tariff Area			
		I	II	III	IV
V. W., 600-799 kgs	A Liability	335	290	190	155
	FK Liability plus Damage	985	940	790	645
Opel Record, 800-999 kgs	A	335	290	190	155
	FK	1035	990	840	675
Mercedes 190, 1200-1399 kgs	A	335	290	190	155
	FK	1135	1090	940	735
Chevrolet Bel Air, 1600 kgs and over	A	335	290	190	155
	FK	1285	1240	1090	825

ROBERT E. BEARD – *England*

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The need for compulsory cover is laid down by the Road Traffic Act. This Act requires that the insured's liability in respect of death or bodily injury to any person arising out of the use of a vehicle on the road shall be covered by insurance. The liability does not extend to passengers in the vehicle unless they are: (1) being carried for hire or reward or (2) being carried in pursuance of, or by reason of, a contract of employment. In addition, it is necessary to cover hospital charges and emergency treatment charges, which are limited by the Act to £50 and 12/6d respectively for each injured (about \$141.75).

The issue of policies which provide only the statutory cover is comparatively rare. The normal type of policy is for comprehensive cover which includes, in addition to the statutory cover, accidental damage to the car, including fire and theft, third party property damage and liability to passengers, as well as some variable fringe benefits, e.g., rugs, clothing and personal effects (limit about £20), personal accident benefits, medical expenses, Continental extensions, etc.

The machinery and method of ratemaking is never divulged but it is safe to assume that there is sufficient classification of results in groups to present suitable adjustment of premiums within those groups. The major tariff divisions are seven geographical locations, three categories of use, eight categories by cubic capacity, and variation of premium according to value of car.

Except as mentioned above, the government has no authority over, nor responsibility for, cover or rates, and there are no cartel laws applicable to insurance. There is a Monopolies Commission concerned with price fixing but the existence of tariff and non-tariff companies takes insurance outside of this area.

The establishment and apportionment of liability is purely a civil matter and is never dealt with by the police. Where it is necessary for liability to be apportioned, this is effected in the main by negotiation with recourse to the civil courts only where it is impossible to reach agreement. The need for apportionment is, however, kept to a minimum by reason of an extensive range of sharing and similar agreements between insurers.

No-claims discount schemes vary from company to company, between 40% and 60% attained over four or more years free of claim. Apart from one insurer the whole earned discount is lost in the event of a claim being made.

There is no "hit and run" cover as such, but the Motor Insurers' Bureau (discussed later) will consider making *ex gratia* payments where it

is established that injury has been caused by a motor vehicle which is not traced.

Reinsurance is generally on an excess of loss basis, the retention probably varying between £2,000 and £10,000 (between \$5,600 and \$28,000).

To provide for cases in which there is, at the time of the accident, no effective insurance to cover the statutory requirements, the Motor Insurers' Bureau was set up in agreement with the Ministry of Transport. The effect of the agreement is, *inter alia*, that the Bureau will deal with the statutory liabilities of the motorist as if such liabilities were insured. By agreement with the separate insurers, each insurer will deal on behalf of the Bureau with claims under policies it has issued but which are not effective in the circumstances at time of accident. Only where there is no policy at all does the Bureau itself handle the claims. The Bureau is financed by the insurers in proportion to premium income.

Typical premiums for comprehensive cover are as follows:

C.C. and value not exceeding	Private Use		Maximum Business Use	
	City	Rural	City	Rural
1100 c.c. £ 500	£ 39	£ 20	£ 58	£ 29
2300 c.c. £ 750	£ 59	£ 31	£ 88	£ 46
Over 4500 c.c. £ 1,500	£ 112	£ 61	£ 168	£ 96

A. TRÖBLIGER – German Federal Republic

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Motorization has made very great progress in the German Federal Republic these last few years.

On January 1, 1964, the number of permits issued for vehicles totalled 10.8 million, apart from so-called "Mopeds" (bicycles with auxiliary motors), which totalled about 1.5 million. This total of 10.8 million is composed as follows:

Motorcycles	1,048,000
Private passenger cars	7,248,000
Trucks	805,000
Vans	503,000
Tractors	1,124,000
Buses	38,000
Cars with special bodies	72,000

There are about 134 private passenger cars per 1,000 inhabitants in the Federal Republic. Thus, the Federal Republic, together with Luxemburg, ranks third on the scale of European countries, after Sweden and France. Sixty-seven per cent of all motor vehicles (Mopeds excluded) are passenger cars. Of these, again 67% are owned by workmen, employees and civil servants, and 33% are company-owned and owned by self-employed persons. This heavy increase in motor vehicles is also reflected in the development of automobile insurance.

The total premium income of insurance companies operating in the Federal Republic amounted to 2,800 million Deutschmarks (about \$700 million) for automobile insurance in 1963. Of the total German insurance premium, the percentage of automobile insurance is 22.6%, i.e., as a branch, it is second in volume – after Life.

Of the premium income of automobile insurance, 79.3% is automobile third party liability insurance, 15.9% is hull and 4.8% is accident.

In 1963, loss experience was not very favorable. As compared with 1962, the loss ratio deteriorated considerably in 1963. The claims average in automobile third party amounted to DM 764 (\$191) and in hull to DM 988 (\$247), full coverage.

Liability for damages caused to a third party by a motor vehicle is regulated according to the Traffic Law which states that the operator of a car must indemnify the damage caused when using a vehicle unless the accident is due to an Act of God (liability on account of hazard).

However, in case other indemnities may be claimed on account of other regulation under Federal Law, the more extended liability (liability on account of negligence) shall apply instead of that under the Traffic Law.

The extent of liability on account of hazard is limited according to the Traffic Law, i.e., in case of death or bodily injury, the person liable to pay damages shall do so only up to a capital sum of DM 50,000 (\$12,500), or in annuities of up to DM 3,000 (\$750) per annum.

The extent of liability on account of negligence is unlimited. In order to render protection of traffic victims more effective, each operator of a vehicle must buy third party liability insurance for himself and the authorized driver to cover material and personal damages caused by use of the vehicle.

The minimum amounts of this obligatory insurance for personal damages are for:

Vehicles up to 6 seats	DM 100,000 (\$25,000)
Vehicles 7 to 10 seats	DM 150,000 (\$37,500)
Vehicles 11 to 80 seats plus DM 8,000 (\$2,000) each for the 11th and each further seat.	DM 150,000 (\$37,500)

The minimum cover for material damage is the 10th part of the minimum sum insured for personal damage.

The legislative body of the Federal Republic is at present studying the increase in minimum coverage according to law. It may be expected that the amount required by law as minimum coverage for private passenger cars (up to 6 seats) will be increased to DM 250,000 (\$62,500), the other coverages to be increased accordingly.

Automobile insurance like any other branch of insurance except marine insurance and reinsurance is controlled by the Federal Supervisory Office for Insurance and Building Societies. From the fact that each operator of a car must buy automobile third party liability insurance for his vehicle, the government derives the right to decree tariff principles for automobile insurance and to make tariffs, general conditions of insurance, general and special rating agreements and the tables of rates dependent on its approval. Taking into account that hull insurance of the vehicle and the automobile accident insurance are closely connected with the automobile third party liability insurance, these branches of automobile insurance are included in the procedure of approval.

Commissions have upper limits by decree. Professional agents shall not be paid more than 12% of the premium. The Cartel Bureau (a kind of Anti-Trust division) see, within the provisions of the law, that automobile insurers do not make agreements among each other which do not correspond to the regulations.

Rates are separated according to types of vehicles (motorcycles, private passenger cars, trucks, tractors, tractor trailers, buses, bus trailers, and vehicles with special bodies). Furthermore, separation is made according to the purposes for which the vehicles in question are used: as to passenger cars, there are those used by the owner, taxis, livery cars and cars used for hire and drive-yourself; as to vehicles used for freight traffic, trucks are separated into those used for interurban hauling, commercial short-distance hauling and commercial long-distance hauling, and those used as furniture removal vans; tractors are separated as to whether they

are used in agriculture or in commercial life; buses are separated into buses, spare buses, hotel-owned buses, factory-owned buses and buses used for training purposes. Within this separation according to type of vehicle and purpose for which it is used, vehicles are further classified according to horse-power or capacity of the engine.

For passenger cars and trucks with permits, in places with less than 5,000 inhabitants, the premium will be reduced by 10% as of January 1, 1965. The same reduction also applies to vehicles owned by farmers, irrespective of the number of inhabitants of the place where the permit to drive has been issued. For vehicles owned by national authorities and their employees, the premium will be reduced by 20% as of January 1, 1965.

Statistics show that the premium required to meet claims for vehicles which have been without claim for one year, is considerably less than that required for vehicles with claim. The premium required becomes even smaller, if no claims have been advised during two years. In that case, the indicated reduction is about 40%. For vehicles which have been free from claim during three years or more, the premium required is about 50% of that required for vehicles with claim. This has caused German automobile insurers to introduce as of January 1, 1965, the following scale of no-claim rebate:

Drivers who did not make a claim during one calendar year have to pay a rate 10% less than they would have to pay in case a claim had been advised.

Drivers who did not make a claim during two calendar years have to pay a rate 20% less than they would have to pay in case a claim had been advised.

Drivers who did not make a claim during three calendar years or more will have to pay a rate 50% less than they would have to pay in case a claim had been advised.

Furthermore, insureds will receive a corresponding part of the so-called technical profit. Each year, automobile insurers must establish a sort of profit and loss account showing on the one side the premium income and on the other the claims paid and the administration costs. Of the profit resulting from this account, insurers may keep for themselves up to 6% of the premium income, the profit exceeding the above-mentioned 6% to be distributed to the insureds.

When calculating the technical profit, administration cost may not be

included for their actual value, but in the utmost by 25% of the premium income.

Automobile third party insurance for passenger cars is offered in five forms (in Deutschmarks, where four DM equal one dollar):

	<u>Personal Damage</u>	<u>Material Damage</u>	<u>Property Damage</u>
Form 1	100,000	10,000	5,000
Form 2	250,000	50,000	10,000
Form 3	500,000	100,000	20,000
Form 4	750,000	150,000	30,000
Form 5	General amount of coverage 1 million without limitation as to the particular kind of damage (personal, material or property).		

The extent of automobile third party liability insurance is laid down in the General Conditions of Automobile Insurance (the so-called AKB) according to which this insurance shall satisfy justified claims raised against the insured or co-insureds on the basis of Public Liability regulations, if by using the vehicle which is insured under the policy, persons are injured or killed, things are damaged or destroyed or get lost or in case property damage is caused which has no direct or indirect connection with a personal or a material damage.

Hull insurance comprises damage to, destruction, or loss of the vehicle and of its parts or accessories either fixed to the car or kept under lock.

Hull partial insurance covers damage caused by fire and explosion; by taking away, in particular by theft; unauthorized use by persons who do not belong to the staff; robbery and fraud; by direct effect on the vehicle of windstorm, hail, lightning or floods.

Hull full insurance, furthermore, covers damage caused by accident, i.e. by an event which has a direct sudden effect from outside with mechanical power (damages caused by handling the brakes, natural wear and tear as a consequence of the use of the vehicle, and machinery breakdown are not considered as damages caused by accident), and by willful and malicious acts by persons who do not belong to the staff.

In both these forms of hull insurance, protection also extends to glass breakage (windscreen).

In hull insurance, indemnities are paid according to the depreciation value. For passenger cars and vans, however, compensation is paid during the first year up to the value as new.

Automobile personal accident insurance refers to accidents the proximate cause of which is driving, using, handling, loading and unloading of or parking the vehicle or trailer. The insurance comprises bodily injury which the insured suffers by an accident (an event which has an effect onto his body from outside). Indemnities are paid under the automobile personal accident insurance in case of death and disability, furthermore for daily benefits and medical expenses. The percentage of disability is determined according to a Table stating a certain percentage of disability for each member of the body which is mutilated.

Under an automobile insurance, there may also be taken out a baggage insurance referring to objects which the insured or his passengers or the driver are taking along for personal needs, in or attached to the vehicle.

Personal damages caused by persons who cannot be found, are indemnified under an "Indemnity Fund for Traffic Victims." This is constituted by an Association of all automobile third party liability insurers. Indemnities from this Fund are paid by contributions of the members of this Association and are assessed according to the premium income of each member.

On account of the high losses which may occur in particular in automobile third party liability insurance, reinsurance is of particular importance. As loss experience may be subject to considerable variations, the form of reinsurance which is favored as a rule is that of a quota share reinsurance which often is combined with an excess of loss reinsurance. In certain cases, there is also the form of stop loss treaties.

KARL H. BORCH – Norway

Dr. Borch, who presented a paper to the Casualty Actuarial Society in 1962, is currently visiting Professor at the Graduate School of Business Administration, U.C.L.A. His permanent position is that of Professor of Insurance at the Norwegian School of Economics and Business Administration in Bergen. He is a member of ASTIN.

In Norway, a new law about automobile liability was passed in 1961. The other Scandinavian countries passed very similar laws at about the same time. We had hoped that the laws would be absolutely identical, but our Scandinavian legislators were not able to agree on this – for a number of reasons.

After three years, the law seems to operate fairly well, although there are a few points which probably will have to be clarified by court decisions. The new law was radically different from the old one, and presented

the companies with some very difficult rating problems, which I don't think they have quite solved yet. Before taking a stand, I should at least like to see the operating results for 1964.

The basic idea of the new law is that most traffic accidents really are accidents, where nobody is at fault. The main social problem is then to make certain that those who are injured or suffer property losses in traffic accidents get compensation, without too much fuss and formalities. (Absolute liability.)

To achieve this, the law requires every motor vehicle to be insured in a company which is allowed to operate in Norway. The person who gets hurt in a traffic accident shall then make his claim directly to the insurance company of the automobile which caused the accident.

One of the most interesting elements in the new law is that it places an absolute limit on the amount which can be awarded to one person as compensation for bodily injury, about \$40,000 or about 15 times the annual earnings of a Norwegian factory worker. This is very much in line with the welfare state philosophy. The idea is that automobile drivers should pay a premium sufficient to secure the national average standard of living to those who become disabled by traffic accident. Persons who occupy a privileged position far above the national average will not get adequate compensation under this scheme. They will have to protect their earning power by taking personal accident insurance. This may be creeping or leaping socialism, but the idea is popular in insurance circles. It has increased the market for accident insurance considerably. It has simplified the ratemaking problem in automobile insurance. You get rid of the nightmarish question of what would happen if an insured car hits a successful dentist, father of ten, who may sue for millions. This dentist may still be a risk to your company, but he will be where he belongs – in the personal accident portfolio.

I should add that it is a fairly widespread view in Scandinavia, expressed in many court decisions, that owners of valuable property should protect that property by insurance and not by bringing suit against people who happen to damage the property. Wilful or criminal damage obviously comes in a separate class.

Norway is a small country with relatively few automobiles. For this reason there are relatively few classes in our rate system. In the present system non-commercial vehicles fall in three classes according to annual mileage. For the rest, rates depend on a system of no-claim bonus.

According to this system the base premium is reduced by 10% for each year without claims. There are six steps to this scale, so that after six years without claims, the premium will be 40% of the base premium. There are also steps in the other direction. For each claim, the premium goes up by 20% of the base premium. The maximum is 140% of the base premium. Drivers with a record so bad that it should give a higher premium are rated specially by a committee, and insured by a pool set up by the tariff companies. There is no competition for this kind of business.

Some non-tariff companies operate on a different bonus scale, or at least have tried it from time to time.

HANS AMMETER – *Switzerland*

Dr. Ammeter is First Actuary and Vice President of Rentenanstalt, a life insurance company in Zurich. He is a member of the Swiss Actuarial Society and the German Actuarial Society. One of the founders of ASTIN, he has been Editor and Vice Chairman and is now Chairman.

It is a privilege for me to talk before the distinguished members of the Casualty Actuarial Society on such an outstanding occasion and I would like to thank you for giving me the opportunity to address this panel. You will certainly forgive me when I am mainly reading instead of talking to you, and will you also forgive my accent and any shortcomings. As you probably know Switzerland has four different languages – English is obviously not one of them.

Although Switzerland is very small in size and covers an area of approximately one-seventeenth the size of Texas, it also has its problems in motor insurance. As a matter of fact, there is no other branch in Switzerland which is as controversial as motor insurance.

Mr. Masterson has been so kind to give me an outline of all the problems that might interest you. I will follow this outline as closely as possible to give you an opportunity for drawing comparisons with other countries. My remarks will, however, be restricted to private passenger cars. Since the official money exchange would give a false picture all comparisons between Dollars and Swiss Francs have been put on the basis of purchasing power. Therefore one Sfr. is counted as half a dollar.

EXTENT OF COMPULSORY COVERAGE

In Swiss motor insurance there is a split which is certainly quite unusual to the American expert. The driver usually covers only the third

party liability risk. Comprehensive policies are rather seldom. The premium volume for liability amounted in 1962 to about \$157 million, while for comprehensive it was only \$35 million. On the other hand nobody will make a difference between bodily injury and property damage. Both types are automatically included in a liability or comprehensive policy.

Only the automobile liability insurance is compulsory. No car is put into circulation without an insurance certificate. The law provides for the following minimum coverage:

- \$ 75,000 for an injured person
- \$500,000 for a claim
- \$ 20,000 for property damage

RATEMAKING

The rating system is very simple. There are five different classifications for private passenger cars in accordance with their physical characteristics, i.e., horsepower based upon cylinder bore and number of cylinders according to the formula

$$HP = 0.4n D^2$$

- HP = horsepower
- n = number of cylinders
- D = cylinder bore

It seems that Switzerland is too small for classifying according to regions. Switzerland, besides the alpine regions, is densely populated and even in the rural territory you can hardly find a place completely deserted of homes and villages. The traffic conditions are therefore not completely different from those in towns. Also the characteristic of the driver is completely disregarded. A small improvement was made when in 1963 a franchise for young drivers below the age of 25 was introduced.

There have been quite a lot of requests these last years to improve the rate structure. As actuary of a life company I regret that the compilation of motor insurance statistics in Switzerland seems to be rather behind times. I think, however, that progress will be achieved within a few years and that other characteristics of the driver will soon form the basis of calculation.

AUTHORITY OF GOVERNMENT OVER COVERAGE AND RATES

The Swiss supervising authorities have no legal power to impose on all companies the same insurance conditions and rates. Nevertheless, this is exactly what is done. There have been only very few cases tried in court

and all companies follow the same pattern. The rates and the conditions are set up by an association, the member companies of which write more than 90% of the total business. The other outsider companies, among them a daughter company of Allstate, apply the same rates. The rates in force have to be approved by the government.

DETERMINATION OF CLAIMS LIABILITY

The liability is usually determined by negotiations. For property damage the guilty party is liable; for bodily injury, however, there is interdependency between cause and effect. For heavy accidents there will usually be a police investigation. The police report will then be entered as evidence. Of course, some cases have to be tried in court. A defendant can appeal several times; the case is tried before the Supreme Federal Court where final judgment is pronounced.

NO CLAIM BONUS SCHEME

The scheme is a merit as well as a demerit plan with 21 categories. The careful driver receives a credit of 40% of the initial premium at the most; the prone driver will be penalized in accordance with the following schedule:

<u>Category</u>	<u>Premium in % of Initial Premium</u>
1	60
2	60
3	60
4	80
5	80
6	80
7	100
8	100
9	100
10	100
11	100
12	100
13	140
14	140
15	140
16	200
17	200
18	200
19	280
20	280
21	280

A new applicant for an insurance cover will start in category 9. For each year of accident-free driving he will advance one step, for each claim he will fall back three steps.

HIT-AND-RUN COVERAGE

There is no such coverage. Since the courts are very severe when a hit-and-run driver gets caught, there are amazingly few property damages which are not reported.

REINSURANCE OF LARGE LOSSES

Reinsurance obviously varies with the importance of the company. Although non-proportional reinsurance is very well known, all companies to my knowledge follow the old pattern of proportional reinsurance. The excess of loss treaty usually provides for a retention by the ceding company between \$10,000 and \$50,000, the smaller amount being kept by the small companies. The percentage of premiums delivered to the reinsurer is about 4%-5% for large companies and 10%-15% for small companies.

UNINSURED MOTORISTS COVERAGE

There is no uninsured motorists coverage to my knowledge.

TYPICAL PASSENGER CAR RATES

As mentioned before Switzerland has no regional rates. The rates are valid for the largest cities and the rural territory as well. Moreover, there is only one characteristic taken into account – horsepower. No characteristic of the driver, neither sex, age, civil status, nor profession or use is taken into consideration.

The rates are as follows for the minimum coverage as provided by law and the unlimited coverage:

<u>Horsepower</u>	<u>Minimum</u>	<u>Unlimited</u>
until 2.09	\$137	\$146
2.10-4.09	153	162
4.10-7.09	204	216
7.10-15.09	245	260
15.10 and more	374	396

The bonus credits will reduce these rates of about 17% as an average.

These rates are the result of the latest rate revision to which the public highly objected. The large drivers' associations are still threatening the

companies to establish their own insurance company. Controversies were brought up because the rates were raised about 33% as an average which is certainly a big step. The insurance companies stated that they had lost \$45 million in the years 1960-1962.

SIGNIFICANT VARIATIONS FROM U.S. AUTOMOBILE INSURANCE

Most of the variations have already been mentioned. The type of coverage is quite different; the rates and conditions are exactly the same for all companies. The competition between companies is only in the field of the service rendered to the public for the same premium dollar. The rating structure is, unfortunately, I would say, oversimplified; statistical investigations are scarce. The liability is different according to the type of damage (property damage or bodily injury).