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AUTOMOBILES TO EXCESS

HOWARD POSNER

THE first motor vehicles appeared on the roads of Europe during the eighteen-eighties, with the first motor insurance policies issued round about 1891. So we are currently celebrating the centenary of this class of insurance.

This means that in a hundred years we have progressed, if that is the right word, from a situation where no cars were to be found to a position where there are currently estimated to be over 400 million vehicles on the roads worldwide. Thus, we have moved from a position where there were no accidents at all to one in which in 1990 there were estimated worldwide to be 4.5 million motor vehicle accidents regarded as worthy of reporting to the authorities. The tragic consequence were over 6.25 million serious injuries and over 125,000 deaths each year. It should be noted that America accounts for roughly 40% and Europe 25% of this total. To put it in another way, somewhere in the world someone is killed or seriously injured by a motor vehicle every five seconds. This is quite a chilling statistic, particularly if one adds to this figure the number of people whose life expectancies are probably cut short by the effects of pollution caused by motor vehicles on the roads today.

It is not my intention to depress you too much, because the chances of being involved in a serious asccident are approximately 100 to 1. Whilst this appears relatively low statistically, you also stand a 100 to 1 chance of dying from lung cancer or 20 to 1 if you are a smoker.

The accident record clearly reflects that there is a need for some form of insurance coverage to ensure that injured individuals are adequately compensated and damaged vehicles repaired or replaced. This potential drain on the economic wealth of a country's economy was recognised quite early by some governments with the direct consequence that now, in most societies, motor insurance is supported by legislation insisting upon the owner or driver having certain types of insurance coverage.

Based upon the accident statistics mentioned earlier, it is hardly surprising to learn that over the period of a hundred years, motor coverage has developed to be the largest producer of premiums and claims for insurance companies other than life business, with third party bodily injury insurance being the largest single category of insurance coverage around the world. It has thus moved a very long way from the dawn of the twentieth century when the horses provided the most normal form of inland transport other than foot.

As mentioned earlier, the potential problems associated with motorised transport were recognised early. One indignant correspondent to *The Times* in 1901 wrote that roads were becoming dangerous "as the most cautious of horses will bolt when suddenly taken unawares by a motor car". There was a need of some sort of obligatory control.

There is some debate as to where the first motor insurance policy was issued, and by whom, with various arguments laying claim between Britain, America and Germany. Nonetheless, irrespective of where the first policy was issued, the original policy wordings used were shaped upon the markets that existed at the time. So if you study early policy documents, they tend to be based on fire or marine policies depending upon what was the normal business of the insuring office.

From these humble origins the growth in premium has reached the position of being the mainstay of the non-life insurers. However, despite the high volume of premium, in recent years this branch can no longer be truly defined as a growth area. At the end of the sixties until the late seventies, on a worldwide basis, premium growth in the branch actually slowed down, for the first time since the introduction of the class, with the share of total business either stagnating or decreasing in all countries (with the exception of Italy and parts of the Communist block).

There are two major reasons for the slowdown in this growth relative to other non-life branches. First, there appear to be signs, despite what you may think if you drive around

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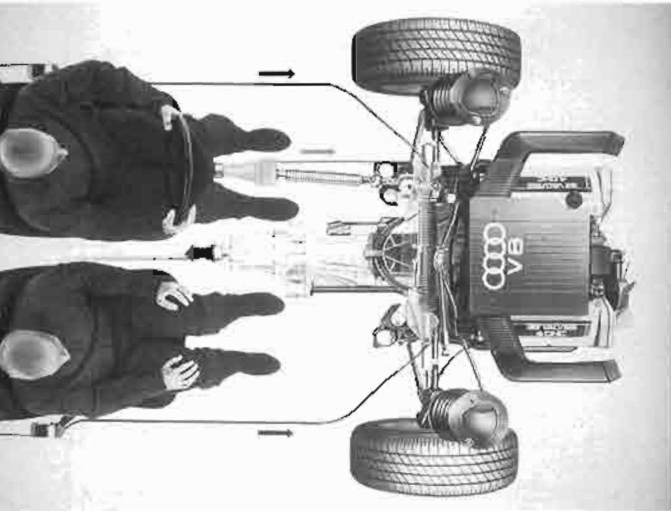
the M25, of initial saturation in the new car market during the late seventies, whilst sales of vehicles have increased, the speed of this increase has dramatically slowed in western societies.

Secondly, despite the currently high number of accidents in the world, there has in fact been a reduction in loss frequency and severity since



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Reducing injury risk, the Procon 10 system

the early sixties, reducing in real terms prices that the ever competitive insurers charge. This reduction in frequency has been caused by improvements in road and vehicle construction, advanced driver training (particularly in the USA and the Third World) and reductions in the average speed limits which are enforced. The severity of losses suffered has also tended to be reduced with advanced medical care of accident victims and improvement in car safety, most especially the introduction of seat belts. Consequently, since 1972 the average price charged to drivers around the world has in real terms decreased. Unfortunately, for reinsurers the trend for large-scale awards over the same period has in real terms considerably increased.

In most countries the risk of individual large losses under motor insurance policies is restricted by the policy limitations. Nonetheless, these limits often prove to be so substantial that claims of the amounts legislated for will severely unbalance a direct insurer's net results. This will happen, above all, as large losses of this nature occur with random fluctuations and are thus not easily predictable on an individual portfolio.

Apart from the countries where there are definite prescribed policy limits, there are also countries which will have certain types of risks where legislation requires unlimited coverage. In some countries, as is the case in Switzerland and France, unlimited coverage has been traditionally comparatively inexpensive and consequently very commonly offered and accepted.

Irrespective of the laws of the domicile of an insurance company, should unlimited insurance coverage be required by law within a certain country, a foreign insurer operating in that territory is also subject to the regulations and they must provide unlimited coverage to their policyholder should they be unfortunate enough to cause an accident in that country. Thus, within the EC the introduction of Green Card coverage as originally prescribed by the London Agreement of 1951, provides a common form of recognised unlimited coverage.

Whilst the potential loss caused by any one motor vehicle is normally both limited and foreseeable adverse circumstances can coincide to cause a gigantic loss out of all recognised probability. Claims managers, when warning of such gigantic losses, tend to quote two possible doom-laden scenarios.

The first involves a car crashing into a petrol tanker in the centre of a town resulting in severe explosions, similar to the tragic real accident at a Spanish camp site. The second example has a car crashing through the perimeter of an airport into the flight path of a Boeing jumbo-jet which in turn subsequently crashes into the built-up area around the airport.

Both of these situations were often regarded to be representative of extremes but in reality the most unlikely chain of events occurred in France, where a motor vehicle stalled on a level crossing and derailed a train. The train then proceeded to plough off a viaduct and crashed into the water some 150 metres below. The train in question was carrying not only passengers, a vast majority of whom were killed or maimed, but also chemicals as freight. The chemicals burst open on impact and were dispersed by the waters under the bridge.

The pollution that followed destroyed the local shellfish industry and the livelihoods of over 75 families. Furthermore, the polluted water was pumped without proper screening into the local drinking system, causing not only immediate deaths and disease but regrettably also resulting in consequential birth defects among those who drank the water. Luckily for motor insurers and reinsurers the claims were of such magnitude that the government intervened. Potentially, however, the whole cost of this could have fallen on one motor insurer's policy, in this case unlimited in liability.

In *motor third party liability* the main risk of a large loss arises in the context of bodily injury claims. Whilst different countries treat these claims in differing ways, compensation for pain and suffering is recognised around the world as requiring realistic compensation, whether this be via the process of a court award or, as occurs in certain areas, by equating the claim "to the price of a life".

In *motor own damage insurance* individual large losses only come through damage to large and expensive vehicles. With vehicles of this

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nature presenting a particularly great risk of theft they consequently require higher premiums and adequate rating. Individual commercial vehicles also constitute high single insured values. In recent times, with the escalation of prices for classic cars, these individual risks have seen motor co-insured between companies.

A particular risk which can result in major losses, particularly in Britain and America, is the insurance of large vehicle fleets parked temporarily in large garages or other confined areas. Similarly, the insurance of major car sales operations or repair operations constitute a large loss potential. Under motor own damage insurance however, it is not individual vehicles or these small accumulations which tend to cause the largest losses but the accumulations involved when a large number of vehicles are damaged or destroyed due to the impact of natural perils.

In practice the most significant accumulations we have seen around the world result from the fact that motor own damage policies cover three natural hazards — windstorm, hail and flood. Hail damage is normally limited by nature to a relatively small area with the majority of serious cases of hail occurring often over less than one square kilometre. Only in exceptional cases have hail storms exceeded 50 square kilometres. Nonetheless a large number of hail storms can occur within a short period of time due to the same meteorological event.

Conversely flood and windstorm events tend to be widespread and often interact with the damage they cause. Thus, the larger number of vehicles that are insured the larger becomes the potential for accumulation losses caused by natural perils. This is an aspect which most insurers, until recently, tended to under-estimate with the result that claims from this source greatly outweighed the premiums received; additionally, a number of insurers have found themselves significantly under-reinsured when it came to the crunch of a major loss event.

By far the most common method of reinsuring a motor portfolio is *excess of loss*. Nonetheless, in certain territories, particularly Germany, reinsurance can often be found in the form of *quota share*. It is worth listing the reasons why an insurer may feel it approrpriate to pass on his motor risks on the latter basis. These tend to be the same ones that apply for most classes of business.

First, quota share reinsurance can be used as a substitute for working capital — for insurers' assets, providing them with an improved solvency margin. In effect they are getting surplus relief. Often quota share reinsurance is used to ensure that legislative requirements of certain countries are met.

Secondly, it can act as a protection against the risk of variance within a portfolio. Arguably, this is the principal function of quota share reinsurance for a motor portfolio. In years of profitable business, the effect is to reduce the profit which is obtained, but, when results are poor, a quota share treaty will relieve the insurer of part of his burden. This limitation is important, given the standard random fluctuation of any account. The risk of variance also increases with the growth of the portfolio due to the effects of change here, and is therefore directly proportional to the size of the portfolio covered. As this risk of change does not depend in any way whatsoever upon the mathematical rules of profitability, it is virtually impossible to quantify accurately and thus insurers will be encouraged to limit the potential effects by using quota share covers.

Thirdly, quota share can be seen to benefit not only insurers but also reinsurers. It can provide a means of giving the latter a wider and more stable base of an insured's portfolio compared to excess of loss treaties which are purely exposed to accumulation.

It is the experience within the NRG group that even when a company has large amounts of proportional reinsurance on its motor account, it is normal for it to arrange excess of loss reinsurance to protect its own net retained account or even the common account for both insurer and proportional reinsurer. Incidentally, despite the claims of certain German and Swiss reinsurers, the NRG group is the principal reinsurer in Europe of motor business based on excess of loss.

A special mention should once again be made of the unlimited coverage granted in certain territories. The majority of insurers are limited by either share capital or guarantee and would find it inappropriate to give unlimited cover without an unlimited protection. Reinsurers are often willing to give this form of cover but they too have limitations imposed on them by size of capital. Lloyd's of London also acts as a deposit for such risks and here the limitation is the wealth of the individual Names who will make up the syndicate granting the cover. In effect,

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Thatcham: Safety, reliability and repairing are constantly being researched

whilst governments legislate for unlimited coverage, in reality all coverage is limited.

The direct insurer, whether he is protecting a motor account, an employers liability account or a public liability account, above all else requires protection against the risk of large unpredictable losses affecting individual automobile policies. Coverage is required both for the individual third party loss and for the accumulation motor own damage loss. Whilst under both forms of cover there are slightly different requirements, they are often taken care of in one reinsurance contract.

Motor third party liability is long-tail by the nature of most of the legal systems around the world. Frequently, the cost of medical treatment and care following on from an accident have to be indemnified for the rest of the injured party's life, perhaps combined with the payment of annuities. During such long periods the reinsurer is subject to a number of variable factors, particularly inflation and medical progress. In addition, losses are often delayed in being reported to reinsurers so there is an instance of incurred but not reported losses each year (IBNR).

Another point worthy of note is that due to restriction of strict liability and the greater social awareness of courts of law, motor insurers tend to be susceptible to increasing awards thus introducing an additional factor other than pure inflation — the so-called super-inflation factor. As a result, motor insurers insist upon certain additional clauses to cover this risk. These are:

- Stability or index clauses
- Claims advice clauses
- Claims settlement clauses
- Annuity clauses
- Certain specific exclusions.

Under motor own damage, accumulation problem is one of the spread in time of events and thus hours clauses have been introduced to identify the event, which is to be covered by the reinsurers.

On the preventative side, there is intense research worldwide to assess the quality of vehicles in production with a view to improving safety, reliability and repairing. Europe's leader here is the Motor Insurance Repair & Research Centre (at Thatcham) which is funded by Lloyd's and the Association of British Insurers. Similar work, often sponsored by insurers and manufacturers, is being done abroad. The Japanese have their *Jiken* centre . . . in France it is the SRA . . . there is Tech-Cor in America . . . and the Danish counterpart is *Automobilforsikringsselskabernes Fællesrad*.

Furthermore, several insurance groups directly finance research. Among them are NRMA, Folksam and Pohjola as well as Allianz and Munich Re whose joint technical centre in Bavaria was described in the last issue of *Global Reinsurance*. As mentioned then, such bodies often move parliaments to bring in new laws. Yet the extent of support from some governments is preposterously low when measured against the frequency of accidents, the casualties involved and the mounting cost to the underwriting industry. ■

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