

Inflation and reinsurance

Ehrenfried Schütte

Volume 42, Number 4, 1975

URI: <https://id.erudit.org/iderudit/1103830ar>

DOI: <https://doi.org/10.7202/1103830ar>

[See table of contents](#)

Publisher(s)

HEC Montréal

ISSN

0004-6027 (print)

2817-3465 (digital)

[Explore this journal](#)

Cite this document

Schütte, E. (1975). Inflation and reinsurance. *Assurances*, 42(4), 271–289.
<https://doi.org/10.7202/1103830ar>

Article abstract

Le docteur Schütte est l'un des fidèles du *Rendez-vous de septembre* à Monte Carlo. Cette année, il a présenté un travail sur l'inflation (ce cauchemar de l'assureur) et la réassurance. Nous avons pensé que le lecteur prendrait connaissance de son travail avec intérêt, même s'il sursaute devant les répercussions qu'une monnaie fondante peut avoir sur des opérations qui, au premier examen, semblent être stables et fructueuses. Pour qu'elles le restent ou le deviennent en période de crise, le docteur Schütte pose quelques conditions précises. Le suivra-t-on dans son raisonnement ? Il appartient au lecteur de nous le dire. A.

ASSURANCES

Revue trimestrielle consacrée à l'étude théorique et pratique
de l'assurance au Canada

Les articles signés n'engagent que leurs auteurs.

Prix au Canada :
L'abonnement : \$5.00
Le numéro : - \$1.50

Membres du comité :
Gérard Parizeau, Robert Parizeau,
Gérald Laberge, Jacques Caya
Mme Aurette P. Gervais

Administration :
410, rue Saint-Nicolas
Montréal

Courrier de la deuxième classe — Enregistrement N° 1638

271

42^e année

Montréal, Janvier 1975

N° 4

Inflation and reinsurance

by

Dr. EHRENFRIED SCHÜTTE

Le docteur Schütte est l'un des fidèles du Rendez-vous de septembre à Monte Carlo.¹ Cette année, il a présenté un travail sur l'inflation (ce cauchemar de l'assureur) et la réassurance. Nous avons pensé que le lecteur prendrait connaissance de son travail avec intérêt, même s'il sursaute devant les répercussions qu'une monnaie fondante peut avoir sur des opérations qui, au premier examen, semblent être stables et fructueuses. Pour qu'elles le restent ou le deviennent en période de crise, le docteur Schütte pose quelques conditions précises. Le suivra-t-on dans son raisonnement ? Il appartient au lecteur de nous le dire. A.

1 — Introduction

1-1 — The first speech given at this symposium shows that one of the causes of inflationary trends is a demand for a certain product

¹ Dr Schütte fait partie de l'équipe de la Munich Re, l'un des réassureurs les plus actifs et les plus féconds.

or service exceeding the supply of such product or service. To take the opposite example, an excessive supply greater than the demand leads to a deflation, i.e. a reduction of prices. Applying these elementary statements to reinsurance, one finds — and this is certainly most unfortunate for the reinsurer — that in our business these two developments occur concurrently and intensify each other:

272

Owing to the excessive world-wide supply of reinsurance cover, our market is subject to increasing price competition as far as premiums are concerned. On the other hand, however, the losses we have to indemnify are a direct function of wages and prices to an extent of about 70%. Considering that we are living in an age of general wage and price increases, it is obvious therefore that claims expenditure is bound to go up.

1-2 — As the influence of inflation on insurance has already been dealt with, two questions are of basic importance in a speech on "Inflation and Reinsurance".

Does inflation have a different influence on the relationship between the reinsurer and the direct insurer, as compared with the relationships between the direct insurer and the insured?

— What steps must be taken by the reinsurer in addition to those taken by the direct insurer, in order to restore the balance of income and expenditure under the reinsurance treaty.

In recent years, a number of excellent papers has already been published regarding many of the individual questions to be considered in this context. Therefore, we will, in what follows, mainly try to survey the overall problem.

1-3 — It should also be pointed out that we shall not only examine the effect increasing wages and prices have on reinsurance, but also the general implications involved when risk factors follow certain trends and result in increasing claims expenditure for personal losses, irrespective of whether these trends are brought about by wage increases, inherent properties of the objects insured, or medical progress. Indeed, it appears expedient to combine the various risk-factor trends in this way, as, often, several such trends occur at the same time and thus make it difficult or even impossible to carry out an individual study of the effects which each of them might have.

1-4 — In reinsurance treaties inflationary developments may disturb the balance between ingo and outgo in respect of both claims and administration expenses. As the effects of such developments differ in proportional and non-proportional reinsurance treaties, it has been decided to treat these two types of treaties independently with a view to considering the effects such inflationary trends and changes of the risk factors may have.

2 — Proportional Treaties

273

2-1 — Claims

Simplifying a little, one may say in the case of proportional treaties that as far as claims and premiums are concerned, the problems confronting the reinsurer are the same as those with which the direct insurer is faced.

This means that any steps taken by the direct insurer in order to improve business — and such steps were dealt with quite exhaustively in the last paper — will also be beneficial to the reinsurer if that business is reinsured.

2-2 — Administration expenses

However, if the Reinsurer pays a fixed commission, the situation is different as far as administration expenses are concerned. If, due to the inflationary development of claims expenditure, the premium increases faster than the direct insurer's internal administration expenses (which are independent of the premium), the direct insurer's expense ratio will decrease. This in turn means that if the percentage of reinsurance commission remains the same, the direct insurer may either make a profit where he was not making one before, or an existing profit may be increased. Of course, this situation need not necessarily worry the reinsurer. In fact, it is quite common in some classes of business that the direct insurer makes an interim profit on the reinsurance commission, and if both of the contract parties have common interests, i.e. if both parties are making a profit, for example, the reinsurer has no reason to object to the direct insurer making a profit out of the commission. However, the situation is different if that profit is so considerable that the direct insurer is still working

successfully while the reinsurer has already slipped into the red. In such a case, the reinsurer must obviously demand a change of the commission as otherwise the direct insurer will not be very keen on increasing the premium (and thus possibly losing advantages as compared with his competitors).

274

Such a development is by no means just theoretical. In fact, it has occurred twice in Germany in recent years: in 1971 when German Motor premiums were increased by more than 40% so that consequently administration expenditure dropped from 23.8% in 1970 to 20.5% in 1971, and in 1972 when, following a similar premium increase in Industrial Fire, the direct insurer's administration expenditure also dropped by several per cent in this class of business. This shows that such a decrease in the percentage of administration expenditure is bound to occur after extremely negative years with heavy claims. The Reinsurer should therefore carefully observe the direct insurer's expense ratio in order to prevent that whilst overall results for the entire underwriting account are permanently unprofitable the direct insurer is making a profit for his net retained account, arising from profits out of the reinsurance commission.

3 — Non-proportional Treaties

3-1 — Excess of Loss Treaties

3.1.1. *Increases of claims expenditure caused by various inflationary factors.*

In an Excess of Loss treaty, the reinsurer calculates his consideration himself. The premium he receives is thus independent of the premium calculated by the direct insurer for the portfolio covered. In most cases, the considerations payable under Excess of Loss treaties are calculated on the basis of statistics — and it is common knowledge that whenever risk factors are subject to rapid change, statistics must be interpreted very carefully. Thus, one has to consider to what extent the statistical values need to be corrected, allowance being made for two different aspects:

3.1.1.1. One must find out first of all whether the burning-cost resulting from the statistics corresponds to the actual claims requirements for the forthcoming treaty year. In so doing, it is assumed that

all claims are settled directly after they have occurred without any delays. The question as to whether the burning-cost of the past may still be applied for drawing conclusions as to the future, depends above all on the most significant characteristics of the objects and persons insured with a view to the risk involved. Of course, it is quite obvious that these characteristics may change as time goes by: an Ocean Hull portfolio in 1960 was quite different from a 1974 portfolio in terms of the ships covered and their size. The same applies to an Industrial Fire portfolio. In all of these branches, the increasing size of the objects insured is a very important factor. This becomes quite obvious if one considers that in 1960, for example, the average sum insured for a direct insurer's share in a portfolio protected by a working-cover amounted to DM 500.000, so that if a priority of DM 100.000 was provided for in the policy, the treaty was exposed up to DM 400.000. If one then goes on to consider that by 1974 the average sum insured for the direct insurer's share had increased to DM 1 million, it follows that with the same priority of DM 100.000, the treaty was exposed up to DM 900.000. Thus, even if nothing else has changed than the size of the objects insured (so that claims probability has remained the same), the premium must nevertheless be increased. Over and above this, it should be noted that studies have been carried out in Industrial Fire insurance showing that claims-frequency increases as the objects insured grow larger. Although no definite statistics have yet been drawn up as far as Ocean Hull business is concerned, it appears most likely that here, too, claims increase over-proportionally as the objects insured become larger. The consequence of this is that if burning-cost statistics cover a period in which the size of the objects insured has changed considerably, the premium must be modified accordingly. How this should be done will be dealt with later on in this paper when we refer to the steps to be taken against increases in claims expenditure.

3.1.1.2. The second question to be considered as regards burning-cost statistics is what will happen if a considerable number of losses are not settled immediately after they have occurred, but many months or even years later, particularly in Third Party Liability. Obviously, the wages and prices at such a time of settlement will in most cases be considerably higher than when the loss occurred, and this is bound to have a certain effect on the consideration calculated

276

by the reinsurer for the Excess of Loss treaty. This delayed settlement of claims leads to a situation which all reinsurers have encountered time and again, i.e. that the burning-costs shown in the statistics gradually drop as they become more recent. In other words, the older the statistics the higher the burning-cost seems to be, while in more recent years it seems to decrease constantly. This is a phenomenon which direct insurers like to attribute to the "improvement of business brought about by a careful revision of our underwriting policy". Reinsurers, on the other hand — and this applies even to the most polite or optimistic ones —, feel that the reason for this reduction of the burning-costs shown in the statistics is that there is still a number of claims below the priority level which seem to play an insignificant role, whereas in reality those claims have not yet reached "the limits of growth" and will certainly have exceeded the priority by the time they are finally settled.

Any increase in claims expenditure between the time of loss occurrence and claims settlement depends on two factors: the average settlement period of the claims coming under an Excess of Loss treaty, and the annual percentage increase in claims expenditure during that settlement period. For example, assuming an average settlement period of 5 years, an annual increase in claims expenditure of 10% will result in an overall increase of more than 60%, while if the average settlement period is 7 years, the overall increase in claims expenditure will even be 95%.

Speaking in terms of the individual classes of business, one must expect the following average increases in claims expenditure during settlement of claims, coming under an Excess of Loss treaty:

— Third Party Liability

The very close and direct connection between TPL claims and wages and the fact that in this class of business the average settlement period ranges from approx. 7 to 10 years, indicate quite clearly that during settlement claims expenditure will increase by 100 to 160%, considering that current and future wage increases will hardly be less than 10% p.a.

— Property insurance

Being about two years (at the most) in Fire and one year and a half in Machinery insurance, the average settlement period in this class of business is much shorter than in TPL. In addition, the price indices of primary significance in this category are not increasing as quickly on a long-term basis as the wage indices so important in TPL. Nevertheless, one must expect that here, too, Excess of Loss claims expenditure will rise by approx. 10 to 15% between loss occurrence and claims settlement.

277

— Marine

In Germany, approx. 80% of all Cargo and Hull Excess of Loss claims are constituted by total losses or constructive total losses and are thus not subject to any increase in claims expenditure between occurrence and settlement. The remaining 20% are partial losses, which basically depend on repair costs and are thus subject to price and wage increases. Our investigations show that the average run-off period of Cargo and Hull Excess of Loss claims is much shorter than for proportional Marine treaties and usually does not exceed two years. Because of this relatively short run-off period and because of the many total losses referred to above, the average increase in claims expenditure between loss occurrence and settlement amounts to about 5% of the total claims expenditure — a very insignificant figure when compared with Property or even TPL insurance.

3.1.2. Steps to be taken against increases in claims expenditure brought about by inflationary trends.

It may certainly be possible to take preventive action against the risk of a fire, a flood, or catching a cold. However, it is unfortunately not possible to take similar steps in order to prevent inflationary trends having an effect on the claims expenditure paid by direct insurers and reinsurers. On the contrary, any change of the risk factors — either an increasing frequency of storms, a drop in labour morale, or an increase in wages and prices — which required claims payment of some kind or at least resulted in enhanced claims probability, must affect the reinsurer's calculation in some way or other. For example, either the direct insurer will have to take over higher loss retention

or he will have to pay higher considerations. It is therefore simply not possible to work with a "cheap" type of reinsurance policy — with the exception, of course, of intentional or unintentional under-cutting below the risk premium. The aim must consequently always be to achieve a fair breakdown of all the costs and expenses, and not to develop a formula which allegedly makes the impossible possible.

It follows from this premise that all of the solutions referred to hereafter (which for reasons of time are only shown in the form of a survey) may basically be split up into three categories:

278

- Solutions which improve the reinsurer's income.
- solutions which restrict the reinsurer's claims expenditure, and
- solutions which make it easier to appreciate and thus counteract the problems resulting from inflationary developments and amended types of cover.

3.1.2.1. Improvement of income

Premium surcharges

It sounds quite easy to calculate premiums in such a way from the very beginning that the claims expenditure anticipated after final settlement is included. However, in practice this can only be done for non-proportional covers with short settlement periods of, say, approximately one to two years. It is quite obvious that in classes of business with long settlement periods, any attempt at calculating the overall inflationary increase in claims expenditure will become mere speculation. Everybody knows the false forecasts made by the economic advisors to our governments. In fact, it happens quite often that the forecasts made by those outstanding experts for the wage and price increases in the year to come miss the mark by 20 - 30% or even more. Moreover, such mistakes are regarded as quite normal and do not necessarily have an adverse effect on an expert's reputation. An Excess of Loss reinsurer, on the other hand, not only has to estimate the exact period of settlement, i.e. the period for which he must make his forecast, but also the average wage increases to be expected during that period. It is therefore quite obvious that considering the periods involved, any false forecasts, otherwise regarded as normal, would have a catastrophic effect on the reinsurer. Assum-

ing a 10-year settlement period and an average annual increase in claims expenditure of 12.5%, 225% has to be added to the risk premium. If then the direct insurer is able to convince the reinsurer that the annual increase in claims expenditure will only be 10% and that the average settlement period will be reduced to 7 years thanks to a better organisation of the claims department, only 95% will have to be added to the risk premium. Assuming once again that after 10 years one finds out that the original pessimistic forecast made by the reinsurer was correct, the loss suffered by the reinsurer will be 130% —the difference between the correct surcharge of 225% and the actual surcharge of 95%. It is therefore by no means unusual that, depending on the priority selected, the premium charged will have to be 5 - 10 times higher than the visible burning-cost if allowance is to be made for the total increase of claims expenditure anticipated. (As a matter of fact, even a premium 10 times higher than the visible burning-cost is sometimes not adequate). Such a discrepancy between the visible basis of calculation and the premium charged constitutes a difficult psychological barrier even for such direct insurers who basically accept the necessity to adjust burning-cost statistics by IBNR supplements and surcharges for the future wage and price increases.

Sliding-scale premium

This is not a special instrument to be used specifically against increases in claims expenditure. Rather, all a sliding-scale consideration does is to balance off all deviations from the anticipated claims expenditure, this being done within the framework of the maximum and minimum rate. In other words, it compensates claims expenditure if Excess of Loss claims frequency is greater than anticipated or if the losses suffered are above the average volume expected by the insurer. Basically speaking, therefore, a sliding scale consideration will protect the reinsurer against the consequences of price and wage increases during the settlement period, provided the maximum consideration is adequate. Such a system is nevertheless only practicable if used for genuine working covers where a certain minimum number of losses is bound to occur every year and where claims expenditure does not deviate too greatly from one year to the next. Otherwise there is a risk that the reinsurer will only receive the

minimum consideration for some years and is therefore not able to set up the reserves he needs to pay for a major loss which might occur one day.

Special records clause

280

It goes without saying that if the statistics underlying a premium calculation are wrong, the premium will be wrong, too. In such a case, the so-called special records clause may provide the necessary security. The purpose of this clause is to correct retroactively the consideration paid for the duration of the cover if it is later discovered that the statistics applied when the policy came into force were not appropriate. However, such a clause is obviously only a partial solution as all it does is to correct mistakes made in the past. It does not make allowance for wage and price increases that have occurred since the inception of the policy, making a possible supplement inadequate from the very beginning. One may therefore state that a special records clause seems hardly valid for Excess of Loss treaties in classes of business with long settlement periods, while it may be quite practicable in Property and Marine Excess of Loss treaties with short settlement periods.

Exposure rating

By calculating the considerations payable under an Excess of Loss treaty on the basis of the degree of exposure, protection is to be obtained against any increases in claims expenditure resulting from the fact that in the forthcoming period of cover, the reinsured risks will have changed as compared to the past. For example, if in 1974 the risks included in the portfolio have grown larger and the values insured have increased from what they were when the burning-cost statistics were compiled, the Excess of Loss premium will be subject to an increased degree of exposure. When applying the exposure principle, the reinsurer does not calculate the Excess of Loss consideration on the basis of the burning-cost, but rather charges that share of the original premium which is applicable to the share in the risk for which the Excess of Loss treaty is exposed. It should nevertheless be considered that such a method of calculation can only be applied if the reinsurer has statistics showing the breakdown of losses by size — and such statistics are not yet available in most classes of

business. Ocean Hull insurance is an exception here, as in this class of business it is possible for the reinsurer (at least in the case of high priorities) to obtain an adequate consideration by charging the usual TLO rate for the degree of exposure and adding a supplement for partial losses, depending on the priority involved.

3.1.2.2. Restrictions of expenditure

Priority expressed in percentage of the premium

281

If the priority of each individual loss is not expressed by a definite amount but rather in percentage of the premium, this will provide a stabilization effect — assuming the premium rate remains the same. However, this stabilizing effect will only become applicable if premiums and claims increase in parallel. It is obvious that in practice this will not often be the case, considering that the premium increase rate is influenced by a number of factors which have nothing to do with the increase of average claims expenditure (enlargement of portfolio/restriction of portfolio, change of portfolio, etc...).

In addition, there is a second restriction which is even more important. This is that any priority expressed in percentage of the premium will only be applicable for each individual year of occurrence. If therefore a premium increases by 10% annually, a priority of DM 100.000 in 1970 will have increased to DM 161.000 by the 1975 year of occurrence. However this higher priority is only applicable to claims occurring in 1975 whereas claims that did occur in 1970 still have the old priority of DM 100.000. Relating the priority to the premium volume thus provides no protection against the increase in claims expenditure for a loss suffered in 1970 until it is finally settled.

Obviously, therefore, a priority expressed in percentage of the premium will not provide a significant stabilization effect in any classes of business with long settlement periods.

Limiting the notification period for each year of occurrence or surrendering the claims reserve

If it is agreed that the reinsurer has the right to surrender to the ceding Company the claims reserve, say, two years after each year

of occurrence has expired or that under an Excess of Loss treaty the reinsurer will only take over claims amounts of which he has been informed within, say, two years after the year of occurrence has expired, this does not necessarily mean that the reinsurer's liability is restricted. The reason for this is simply that the direct insurer has the possibility in such cases either to increase considerably the claims reserve to be surrendered after two years or to notify the reinsurer of a higher claims amount just as a precaution. The result of such a prophylactic increase of the known claims expenditure is that this higher figure will also be included in the burning-cost statistics. This in turn means that the reinsurer will receive a higher Excess of Loss consideration sooner than expected, without however having to adjust the existing burning-cost statistics for claims which have already occurred but of which he has not yet been informed or for which the reserves set up are inadequate. It has already been mentioned that this is a difficult — and frequently unsuccessful — procedure.

Our own experience with such agreements has not been very positive so far. One often notices that even when insurers seem to be absolutely convinced of the quality of their own claims reserves, they always start feeling unsure of themselves once they have to take over the risk of running off the reserves for own account.

Stabilization clause

In the course of the past 10 years, the stabilization clause has probably received more publicity than any other method applied for counteracting the inflationary increase in claims expenditure. In fact, a number of excellent papers have been written by advocates and opponents of the stabilization clause, and I may take it for granted that they are known to all of you. I would therefore like to confine myself to one aspect which we consider particularly important:

The effect of the stabilization clause is that any increase in gross claims expenditure is split up equally between the priority and the excess. In other words, the percentage share in the overall claim taken over by the Excess of Loss reinsurer still remains the same even if claims expenditure increases during settlement. This in turn means that if the supplement charged to compensate wage and price increases is insufficient, this insufficiency is limited to that part of the claim attaching to the Excess of Loss treaty. At this point I would also like

to do away with a false idea that many people have, namely that a stabilization clause is not essential whenever a treaty has a high priority. In actual fact, it is just the other way round: the higher the priority, the greater the relative effect an insufficiently calculated supplement will have on the reinsurer. Let me give you an example in this context:

If a claim which was originally DM 500.000 increases by 20% to DM 600.000, the amount payable by the reinsurer will increase from DM 400.000 to DM 500.000 if the priority is DM 100.000, so that the reinsurer's percentage share will increase by 25%. Assuming, on the other hand, that the priority amounts to DM 40.000, an increase of the Excess of Loss claim from DM 100.000 to DM 200.000 constitutes a percentage increase of 100%. This means that the consideration amounts to only 50% of what it should amount to.

283

If a reinsurer calculates the Excess of Loss consideration without a stabilization clause (and this is basically quite possible), he has to bear the risk of a calculation error brought about by future wage and price increases all by himself. To give you an idea of what this risk may be, I have already referred to the supplement charged for increases of claims expenditure during settlement, which may amount to 200% and more of the burning-cost. If the reinsurer wants to do without a stabilization clause and take over the entire increase in claims expenditure (and not just the share applicable to the excess), the supplement to be charged for future wage and price increases must once again be increased considerably, depending on the priority involved and the average original claim. It is obvious therefore that if the reinsurer decides to do without the stabilization clause, the uncertainty factor in his calculations will be further increased by the uncertainty inherent in every supplement charged for future wage and price increases. However, if a calculation is subject to so many uncertainties that the actual claims volume of an entire portfolio may deviate from the calculated claims volume by several 100%, we feel that this is not insurance business any more, but just a haphazard bet.

Any apprehensions that a stabilization clause will enable reinsurers to make an excessive profit, are not justified. You will probably know that in German TPL business, we agreed with our ceding companies 6 years ago to apply an automatic stabilization clause. The result of this has been that even though the clause has helped us in

individual years to make savings several times higher than the Excess of Loss considerations paid under some treaties, most of the years of occurrence ever since 1968 have already dropped into the red now.

3.1.2.3. New Methods

Cover on reporting year basis (instead of the year of occurrence)

284

The purpose of an Excess of Loss cover is to protect the direct insurer against the adverse effect individual major losses may have on his business. One should note that current TPL Excess of Loss treaties only fulfil this function to a limited extent. Assuming that with a priority of DM 150.000 it is noticed in the 1972 calendar year that a loss which occurred in 1965 and was reserved at DM 140.000 up to the end of 1971, will now cost DM 155.000, the additional amount of DM 15.000 payable by the direct insurer in 1972 will not make it absolutely essential for him to be protected by an Excess of Loss treaty. However, with a conventional cover based on the year of occurrence, this additional amount would result in a claim under the 1965 Excess of Loss treaty. Considering nevertheless that the important thing in an Excess of Loss treaty should be the balance sheet year in which an additional claims burden is reported for the first time, it would appear expedient to base the Excess of Loss cover not on the year in which a claim has occurred, but rather on the year in which such a claim or a change thereof is reported for the first time.

Of course, this method has the obvious disadvantage that the direct insurer is able to manipulate the claims burden more than he can when applying the orthodox type of cover. On the other hand, however, it also offers a very important advantage in terms of premium calculation. While it is necessary when calculating premiums on the basis of the year of occurrence to adjust the burning-cost by surcharges for IBNR claims and future wage and price increases, the existing burning-cost, whenever quotations are made on the reporting year basis, merely has to be adjusted by a surcharge for profits and increased costs and by a possible trend surcharge for covering the last statistical year up to the year of cover. As there would be no run-off period in such cases, the claims notified cannot become more expensive during settlement.

By limiting the claims volume for each year of notification or by agreeing with direct insurers that claims amounts which come under an Excess of Loss treaty and have already been settled, must be reported at once, the reinsurer is able to protect himself against manipulations which would otherwise be possible with such a system.

Maximum claim reinsurance

When applying this type of cover — which, incidentally, has already been used in some cases — the reinsurer provides indemnification for the, say, 3, 5 or 7 largest losses occurring during one single year. The principal difference between this concept and a conventional Excess of Loss cover is that the reinsurer grants full indemnification right from the first penny upwards. However, although the reinsurer has to take over all increases in claims expenditure in such cases, he does not have to do so over-proportionately as in the case of a conventional Excess of Loss treaty, as there is no priority. The main advantage of determining the number of claims is that, during settlement, claims will not “grow into” the cover step by step, this being one of the most important reasons for the over-proportionate increase in claims volumes under Excess of Loss treaties. It should also be noted that when applying a maximum loss reinsurance concept, it is not necessary to have a stabilization clause with the task of splitting up wage and price increases equally between first and second risk.

Cover is quoted on a burning-cost basis, a supplement being added for future inflationary trends. As with this type of cover increases of wages and prices are only covered proportionately and for a limited number of claims, the burning-cost for the individual years of occurrence will be stabilized earlier than in the case of an Excess of Loss treaty. In fact, while it is by no means uncommon that in an Excess of Loss treaty the burning-cost will deteriorate by 20 - 30% even in the fifth and sixth year of settlement, such drastic changes at such a late point are very unusual in maximum loss reinsurance. The result of this is that in maximum loss reinsurance, the surcharge for wage and price increases only constitutes a fraction of what it is in an Excess of Loss cover. It is a fact that a substantial burning-cost becomes visible relatively early and that makes it unnecessary to adjust statistics to any considerable extent. Quite obviously, this is an important advantage as compared with an Excess of Loss cover

where, as I have already pointed out, one of the greatest difficulties is to convince the ceding company that the Excess of Loss consideration may be 5 times, 10 times or even more of the visible burning-cost and is nevertheless barely adequate.

In maximum loss reinsurance, it is common practice to surrender the claims reserve after 7 to 10 years at the most.

286 I would like to add that this type of cover only appears really expedient if the frequency of large losses is more or less constant. Thus, it is more suitable for Motor TPL than it is for General TPL portfolios.

The fact that this type of cover — which constitutes a technically feasible alternative as compared with a conventional Excess of Loss cover with a stabilization clause — has not had a considerable impact so far, is probably because it makes one thing clear from the very beginning which under an Excess of Loss cover with a stabilization clause does not become apparent until settlement has already been underway for some years. What I mean is that there simply cannot be a really cheap type of reinsurance against rising wage and price trends and the effects they have on claims expenditure. The commitments taken over by the reinsurer must come to bear on the calculations in some way or other, either in the form of premiums or in the form of participation held by the direct insurer.

3-2 — Stop Loss covers

In those classes of business where changes of the individual risk factors and particularly wage and price increases constitute the most important element, Stop Loss treaties are rather unusual or are not applied at all. I would therefore like to confine myself to just a few general statements regarding the influence inflationary trends have on this type of treaty. Basically, it should be noted that with Stop Loss treaties wage and price increases will cause problems as well on the side of claims as on the side of administration expenses.

3.2.1. Administration expenses

One of the principles in Stop Loss covers is that the direct insurer is not guaranteed a technical profit. In other words, the limit above

which the Stop Loss becomes applicable must be fixed in such a way that the claims retained reach or exceed 100% of the premium together with the commissions, administrative expenditure, and the Stop Loss consideration. It should be realized that any increase in premiums exceeding the increase of administration expenditure not dependent on the premium, may cause the expense ratio to decrease, the effect of this being that the reinsurer virtually guarantees the direct insurer a profit — unless of course the claims ratio does not increase at the same time. In order to avoid such a situation, the reinsurer must keep a very close eye on the original expenditure so that he is able to modify the priority if necessary.

3.2.2. *Claims*

Here, the situation is similar to an individual Excess of Loss treaty: if the Stop Loss priority stays the same while the gross claims rate increases, the burden thus created will affect the reinsurer only.

The purpose of a Stop Loss is to cut off, as it were, above-average deviations of the claims ratio in individual years. In other words, it is expected when providing for a Stop Loss that claims ratios will differ from one year to the next so that years with high claims ratios will be followed by years with low claims ratios. Recently, however, various classes of the insurance business have been characterized to an increasing extent by definite claims trends, the result of these trends being that the statistics of the past serving as the basis of calculation have to be corrected. The problem is therefore to recognize such trends in good time and to make allowance for them in the calculations in advance.

In the case of an individual Excess of Loss treaty, it is relatively easy to recognize this trend as it will depend on a limited number of factors which can be determined with a varying degree of accuracy: parallel development of the average claim and the wage increase curve in first risk insurance, increasing size of the object insured in Non-life and Marine insurance classes.

The annual claims ratio, on the other hand, which serves as the basis for a Stop Loss cover, is influenced by a number of factors both on the premium and on the claims side. While some of these factors eliminate each other, others add up to form an aggregate

effect. This may have a twofold result: the first possibility is that a trend which would actually have to be included in the Stop Loss calculation is not recognized at all, while the second possibility is that the trend as such can be detected, but cannot be quantified adequately.

If therefore a trend cannot be forecast clearly and thus cannot be taken into consideration (properly) in the Stop Loss calculation, the reinsurer basically has only three possibilities of counteracting possible trend-like deteriorations of the claims rate:

- Sliding scale premiums
- Limiting the reinsurer's annual liability
- Giving the direct insurer a share in the claims even after the Stop Loss priority has been exceeded.

4 — Summary

4-1 — Trend-like changes of the individual risk factors and above all wage and price increases will most probably play an even more important part in the years to come than they have so far.

4-2 — As far as non-proportional treaties are concerned, such changes will have greater effect on the reinsurer than on the direct insurer, particularly in Excess of Loss treaties with long settlement periods.

4-3 — As risk factors may change relatively quickly and with long-lasting effects, the old principle applied in former times to wait for the loss first and then to earn it back by charging higher premiums, is not commercially feasible any more. This applies all the more when one considers that in an age where the supply of reinsurance coverage is excessive all over the world, reinsurers usually do not even get a chance of earning back the losses they have suffered.

4-4 — It therefore seems essential to make allowance for any anticipated trends by modifying calculations from the very beginning. Here it should also be noted that statistics based on past experience and extrapolated for the future, provide a certain amount of assistance, which is however by no means always sufficient. Thus, it must be the aim of all reinsurers to study future developments more

closely than developments in the past. This in turn is a task which requires new qualifications of the reinsurers' staff. It is precisely for this reason that many reinsurers now employ an increasing number of engineers, mathematicians, chemists, statisticians and other specialists, as in this way they are able to observe the risks insured and the factors of significance for premium calculations more closely than in the past. It is only by taking this approach that reinsurers are able to adapt their premiums more rapidly to the actual claims experience.

Québec 1974. Fiches Économiques, n° 1 : l'industrie du papier au Québec.

A elle seule, la province de Québec produit 17.6 pour cent du papier journal dans le monde. Si l'on ajoute 20.1 pour cent pour les autres provinces, on a une idée de l'importance de sa production, aussi bien pour notre pays que pour les grands marchés consommateurs américains et anglais. Certaines usines appartiennent à un groupe de journaux qu'elles approvisionnent. Les géants — tels Consolidated-Bathurst et Abitibi Pulp and Paper — sont les grands fournisseurs. Quels atouts ils ont en main. Il y a deux ou trois ans, on mettait leur subsistance en doute à cause des progrès techniques laissés trop loin derrière ou des concurrents étrangers mieux outillés. Devant la hausse des prix, les choses sont rentrées dans l'ordre, même si les cours en bourse ne tiennent pas compte de la hausse des profits.

Dans *Québec 1974*, vient de paraître une étude sous le titre : « Fiche économique, numéro 1 ». Nous y renvoyons le lecteur curieux des résultats de cette industrie, l'une des principales au Canada.

Consolidated-Bathurst vient de vendre au gouvernement du Québec, pour quelque 24 millions de dollars, un domaine immense en plein Saint-Laurent, à l'entrée du golfe. Mon île est un empire aurait pu dire le Sénateur Menier, propriétaire de Chenonceaux et grand chocolatier de France, qui y jouait au grand seigneur avec manoir et bateau. Il y recevait ses hôtes magnifiquement jusqu'au moment où lui ou sa succession — peu importe — vendit à Consolidated-Bathurst cette réserve forestière où les bêtes, dites sauvages, vivent en liberté. Le groupe a cédé l'île à l'Etat québécois après s'être rendu compte que la coupe du bois coûtait trop cher, me disait l'autre jour après une assemblée de Conseil, un marchand de bois qui sait ce qu'il en coûte de couper et de transporter du bois d'une île au littoral et, delà, aux centres de consommation. Il est heureux que l'île d'Anticosti soit ainsi devenue un autre parc de l'Etat, pendant qu'il est encore temps.