Section C
COMPANY & EXTERNAL INFLUENCES

Preamble

If we lived in a world where nature and human activity were well behaved and gave no cause for upset or surprise, then claims reserving would be a simple matter scarcely requiring the services of the expert. One would need to assess the values of at most three quantities for each class of business: a) the exposure to risk, b) the frequency of claim, and c) the average loss per claim. Past and present trends for these factors could be assumed to hold equally in the future, and the known patterns could be projected forward with confidence.

However the real world is full of uncertainties so that projections are seldom straightforward. For protection, the reserver needs to acquire a knowledge of the influences which are most likely to disturb the picture. Only in this way can he or she hope to produce figures in which theory is properly tempered by reality. The present section outlines the main influences, both internal and external to the company, which usually need to be taken into account.

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[C1]
CLASSIFICATION & GENERAL ANALYSIS

It is useful to have a systematic listing of the factors which may disturb the claim development pattern or the continuity of the loss ratio for a given class of business. With such a tool at hand, the reserver will be less likely to omit a relevant influence from the analysis.

To begin with, a clear distinction can be drawn between those factors over which a company has control, because they are part of its internal operation or its marketing, and those over which it has no control because they are part of the larger environment in which it must operate. We shall call these the company and external factors respectively. Going a stage further, on the company side we may distinguish:

a) Business Mix & Volume
b) Underwriting, Rating & Policy Conditions
c) Claims Handling & Definition

Of these, b) and c) are factors over which the company has the most control. Over a) it will have at least partial control through its marketing tactics and strategy. The factors are not all independent — underwriting policy will affect the mix of business achieved, for example — but they each contribute in a distinct way to the reserving problem.

On the external side, we may again distinguish three main different types of influence:

a) Inflation & Economic Factors
b) Legal, Political & Social Factors
c) Climate & Environmental Factors

Under a), investment conditions and currency exchange are important factors apart from inflation. Under b) such influences as legislation and the trend of court judgments are relevant, and c) covers such aspects as severe weather, catastrophes both natural and man-made, and the existence of latent hazards.

The remainder of this section, §C, gives a fuller description of the factors which can influence the claims projection under each of the six main headings above.

General Effects to Analyse

Before going on, however, the point arises as to how the effect of each of the influences may be analysed. A short comprehensive answer cannot be given, since so much will depend on the particular circumstances of the case. But there

Are two general questions which can be put when examining any given factor. These seek to discover where the main influence of the factor is felt.

The first question asks whether the effect is chiefly on:

a) the Ultimate Loss (or Loss Ratio), or
b) the Claim Development Pattern.

This distinction is particularly important. Suppose a change in the claim development pattern is detected for the early years. The reserver will need to estimate to what extent this will be carried through to the ultimate position. He or she may, for example, find that the change is the result of an increase in inflation, which is expected to persist. The effect will clearly carry through to the ultimate amount to be paid out on the given business. On the other hand, the reserver may discover that a change in claims department staffing has caused an increase in the claims handling rate, so that the effect on the ultimate loss will be negligible.

The second question distinguishes an influence on:

a) the Number (or Frequency) of Claims, and
b) the Average Cost per Claim.

The distinction is again an important one. In general, at the reserving date, the information on the number of claims will be better developed than that on the average cost per claim. Hence it is factors of the latter type to which the claims reserving process has the greater sensitivity.

To give an example, a factor such as an increasing burglary rate will mainly affect the number of claims on a given subgroup of business. Its effect will quickly be detected in the increased number of reported claims per unit exposure, and so can easily be dealt with in the reserving process. But a factor such as an increasing level of court damages awards will operate more on the average cost per claim. Its effect on those reported claims which are still open at the reserving date may not be easy to assess, let alone its effect on claims of the IBNR variety.

[C2]
BUSINESS MIX & VOLUME

This section looks at the important aspects of the business mix and volume. The reserver should be aware of the general characteristics of mix and volume for each of the chosen subclasses of business, and how these may be changing over time. The consequences of such changes for the claims development pattern and the ultimate loss ratio can be very appreciable. Another related factor considered in this section is the new business proportion, i.e. in relation to renewals and the in-force.

Changes in Business Mix

Ideally, a class or subgroup of business for analysis will be chosen for the homogeneity of the risks which it covers. As seen in §B2, this lends stability to projections carried out by statistical means. But in practice the ideal is seldom attained, and more often the business groups will be amalgams of different elements.

A good example is the general liability group, which may contain a wide variety of public and product liability type contracts. In such a case, the claim development pattern can be much affected by changes in the balance between the different elements in the group, as can the ultimate loss ratio. We need to gain some idea as to how the balance in the group is changing, and what the likely effects will be.

As a simple example, take the case of a private motor account which is undifferentiated as between the comprehensive and non-comprehensive policies. Claims on the former policies will have a substantial physical damage element, and this will be largely paid off in the first two years of development. But the latter policies, being essentially third party type insurance, will have a greater proportion of settlements at two years or more. Hence if the balance of business in the account changes, the claim development pattern will also change. A projection for reserves which is based purely on the historical pattern will give an erroneous view, and must be corrected.

Sample figures, showing the percentage of the overall claims settled in the two time periods, follow. Comprehensive business is taken to outweigh non-comprehensive in the ratio 2:1.

	Comprehensive	*Non-Comp.*	*Whole Group*
Yrs 1–2	70%	40%	60%
Yrs 3+	30%	60%	40%

If a recent year's business shows claims development of £1m to the end of 2 years, the projection to ultimate on this basis will be just: £1m / .6 = £1.67m. Suppose now that non-comprehensive business has already increased to form

50% of the portfolio. The proportion of claims actually settled by the end of 2 years is in reality 55% only. Hence the correct projection to the ultimate will be: £1m/.55 = £1.82m.

In this example, business mix changes because of the mix in major policy types making up the group for analysis. There are other factors, however, which can also be important. Some cases in point would be:

Class	*Mix by*	*Example Categories*
Commercial property	Perils covered	Fire/Storm & Flood/Theft/ Consequential Loss
Employers' Liability	Industry profile	Manufacturing/ Distribution/ Service Industry
Professional Indemnity	Professional groups	Accountants/ Solicitors/ Doctors/ Architects
Householders'	Geographical area	Inner city/ Suburban/ Rural area
All Classes	Risk profile	% of poor or above average risks in the portfolio

Changes in Business Volume

Any substantial change in the volume for a given business group requires some analysis. It may come about, for example, from a recent and marked change in the premium rates or the underwriting standards. These will in turn affect the risk profile, changing the proportion of poor or above average risks on the books. Alternatively, it may be that the demand for a particular type of insurance cover has risen sharply, so that the business mix of the group is again altered.

There is an important technical effect of a change in business volume which should be noted. Suppose that the volume of a given line rises quickly during the year. The higher proportion of the business must then be written in the later months. The average duration in force at 31 December is thus reduced from that for a year where the business volume is constant, or only slowly rising. Since claims take time to be reported and settled, the proportion of claims settled by the end of the year must be less. Also, the proportion falling into the IBNR category will be increased. Adjustments to the projections will be needed, since to use the historical pattern alone would appreciably underestimate the final loss. Where the business volume is rapidly falling, the reverse effect will apply, i.e. the proportion of claims settled by the end of the year will be greater than normal. The use of strict historical patterns would then overestimate the final loss.

This "business acceleration" effect will operate whether accident or underwriting year is taken as origin. But the manner of operation will be somewhat different in the two cases, owing to the different patterns of exposure to risk which they employ.

Other points on business volume are:

a) Abrupt changes can affect the claims processing rate, causing either a logjam or a hiatus to develop in the work of the claims department. Either way, the claims settlement pattern is liable to be distorted.

b) Appreciable overall changes can make any business group more or less stable from a statistical point of view. This happens purely because the number of independent claims in the analysis is affected.

Changes in Business Volume

One aspect of business mix and volume is the proportion of new business to renewals. This can be a useful signpost. A high proportion of renewals denotes a stable portfolio, which may be expected to behave with some regularity in the future. But a business line with a high proportion of new policies is more likely to be volatile in its risk profile and claim development patterns.

In general, the new business in any class would be expected to show a different loss ratio than the renewals. Hence, an analysis of the in-force for the proportion of new business it contains can be of service to the reserver.

[C3]
UNDERWRITING, RATING & POLICY CONDITIONS

This section deals with influences on the claims pattern and ultimate loss which arise from the conditions under which business is written. The main headings are:

Underwriting Standards	Deductibles
Rating Levels	Policy Limits & Retention
Policy Conditions	Levels

Underwriting Standards

A change in the underwriting standards for a given business class may be expected to change the risk profile for that class. Thus, if standards are relaxed, then risks that were formerly on the borderline or unacceptable will be taken on. This will produce a shift in the claims experience, through a higher claims frequency, or a higher average cost per claim, or perhaps both. Conversely, tightening the underwriting standards will push out some of the poorer risks, so reducing either or both of these quantities.

A further effect will operate on the volume of business. Other things being equal, a relaxation of the underwriting standard will tend to increase the volume, and vice versa. Hence the consequences discussed in §C2 should be considered. Again, with a heterogeneous business class, the underwriting change is likely to affect some lines only within the class, or to affect different lines in different ways. The business mix may therefore become an issue, as well as the volume.

These effects are easy to describe in theory, but will not be so easy to quantify in practice. The main point is for the reserver to be aware of their existence, and to distinguish those changes which are significant for reserving purposes from those of minor consequence only. It goes without saying that good lines of communication with underwriters will help the reserver to keep abreast of the position.

Rating Levels

A change in rating levels may be considered as part and parcel of an underwriting change, so that the points from the above paragraphs can again be relevant. There may, however, be different reasons for a rate level shift:

a) As part of a general shift in market rates, e.g. passing from a soft to a hard market.

b) As a tactical move by the insurer, changing the position of the insurer relative to the market as a whole.

The effect on the risk profile and business mix obtained will tend to be far less marked if a) is the case rather than b). It is the tactical shifts that will have the greater influence on the claim development pattern. However, shifts of the whole market will affect the loss ratio. By the same token, they may help to indicate the phase in the underwriting cycle which the market has currently reached. Such information will support any loss ratio projections which are being done, and will strengthen the reserver's perspective on market events.

Policy Conditions

A great variety of policy conditions can apply to the different lines of business, which it is scarcely possible to cover here. But a simple example may help, relating to the No Claims Discount (NCD) in motor business. In recent years, a form of policy with NCD protection has been offered by a number of insurers. The protection is granted on payment of a percentage addition to the premium, and has proved popular. Its adoption has, as expected in the portfolios concerned, yielded a larger proportion of relatively small claims with a short duration to settlement. Thus claim frequency, average cost and settlement pattern have all been affected. In such circumstances, most projections will require adjustment.

Deductibles

The introduction of a deductible to a policy type, or an increase in value of a deductible, will affect both frequency and average cost per claim. Frequency will be reduced, because a band of the smallest claims is eliminated. Average cost will be affected in a less certain way. It will tend to be increased by the loss of the smallest claims, but to be decreased by the operation of the deductible itself against the remaining claims in the group. Overall, the result will more often be an increase in average cost per claim. However, provided the change in the deductible is not a drastic one, the effect on the claim pattern may often be ignored in practice.

In normal circumstances, the most important question will not be the absolute value of the deductible — but whether it keeps pace with the claims inflation for the business class over the years.

Policy Limits & Retention Levels

Changes in policy limits will not affect the frequency of claim, but will influence the average cost. As with deductibles, the main question is the relationship of the policy limit to the claims inflation over the years. If the changes are *not* in line, then the percentage of claims reaching the limit can change markedly, altering the shape of the claim distribution and the development pattern.

Retention levels for reinsurance purposes again set a limit on claims, which may or may not move with the claims inflation. Hence similar effects to those noted above can occur. Where the analysis is being carried out gross of reinsurance, however, changes in retention levels will not be relevant. (The question of using figures gross v. net of reinsurance is treated in §D4.)

[C4]
CLAIMS HANDLING & DEFINITION

In this section, we consider influences arising from the way in which claims are defined and handled by the insurer. These affect mainly, but not exclusively, the claim development pattern rather than the ultimate loss. The main headings are:

Claims Definition
Recording Procedures
Case Estimation Practice
Settlement Practice
Staffing Levels

Claims Definition

The idea that "a claim is a claim is a claim" is not quite true. To begin with, insurers may give different treatment to multiple claims which arise from a single accident. Some will bring all such claims together, and count the accident as giving rise to a single, composite claim. Others will open a separate file for each individual claim that is made. From the reserving point of view, which system is used does not matter, so long as it is used consistently.

Another point arises in the treatment of claims which are either made in error or are spurious. Are these to be counted as proper claims to begin with, the formal rejection coming later on, or to be ignored in the first place? Again the practice does not matter, so long as it is consistently held to.

Next should be considered the separation of claims for special treatment. Insurers may sometimes use streamlined procedures for dealing with claims for relatively small amounts, especially in personal lines business (this may occur, for example, under block policies where claims up to a certain level are handled externally by a broker or other body). The cut-off point for such claims then becomes important. If it is raised, the claim numbers, average costs and durations to settlement will be changed both for the main group of claims and for the streamlined group.

Recording Procedures

The claims recording procedures used by an insurer can affect the reserving data all along the line. Particular points of importance are:

a) Initial reporting of a claim, and its recording in the data-base.
b) The approval and disbursement of claim payments.
c) Closing of claim files where no payment is made.
d) Re-opening of previously closed claim files.

The procedures may be subject to change from time to time, especially because of improvements in computing equipment and data processing methods. Much can be affected, for example, the effective cut-off date for a given claim category, or the time interval between the first reporting of a claim and its entry as a formal record to the insurer's data-base. Such changes can distort the figures provided for reserving purposes. As with the other influences on the claims pattern, the first requirement is for the reserver to ensure that he or she is informed of the changes that are taking place so as to be in a position to take any necessary corrective action.

Case Estimation Practice

An important input for the reserver is the case estimates on open claims provided by the claims department. This feature is dealt with in more detail in §F1. The main points to note are:

a) The reserver should know on what basis the case estimates are made. E.g. Do they allow for future claims inflation? Do they contain any implicit safety margin?

b) Consistency of practice over the years is more important than absolute accuracy. If the basis is changed at some point, say to become more or less conservative, then the figures will need to be adjusted prior to use in a projection.

Settlement Practice

As with other aspects of claims handling, the important point is the consistency of settlement practice. There is a number of features here. First is the degree of resistance put up to borderline claims, and the toughness of the negotiating stance where the amount of a large claim is in dispute. Although firm resistance may reduce claim costs, it will involve higher expense, particularly on the legal side — there is a trade off, which has to be resolved. All is well so long as the insurer's stance is constant, but if it changes the claims distribution and duration to settlement can be affected. One effect of increased resistance, whether or not it results in financial gain, will be to slow down the claim development pattern.

A second point is the use of the partial settlement. Particularly in such cases as compensation for industrial disease under employers' liability, the period to final settlement may be long drawn out. One or more interim payments may therefore be made to the claimant. Policy as to the amount and timing of these can be varied, again with an effect on the claim development pattern.

Another influence will be the practice with regard to claims remaining open, but on which there has been no action for a long time. From time to time, a closing off exercise may be carried out, in order to despatch as many such claims as possible. If the exercise is done regularly, there should be no undue distortion of the figures — but if spasmodic, then it could affect, for example, the consistency of case estimates.

Finally, there is the treatment of those claims which are closed without payment. Are such claims to be included in the number of claims settled, or not? The effect of the decision on both claim numbers and average costs in the group of settled claims can be very marked. Once again, the reserver needs to know what basis is being used, and to be satisfied that it is used consistently.

Staffing Levels

The adequacy of staffing levels in the claims department to deal with the volume of business can be important. If a surge of claims comes in, or if staff are below establishment for a time, a backlog can build up. The claims data produced for the given time period will be distorted, so that some correction may need to be made. There is also the point that quality and consistency of work may suffer where undue pressures are placed on the staff. Such effects may be detected in changes in claim settlement rates.

Another point on staffing is that if there is a high turnover, then it will be difficult to maintain the needed consistency of work over time.

[C5]
INFLATION & ECONOMIC FACTORS

Inflation

Under modern conditions, inflation is a major influence on the ultimate loss experienced on any class of business. It is always necessary to consider how inflation is to be dealt with in the reserving calculations. Many methods (e.g. the separation method, Bennett & Taylor's Method "A" see §J) take explicit account of inflation in making the claims projection. Others (e.g. the year on year version of chain ladder) make no explicit allowance, but take any inflation already present in the data and project it into the future at the same rate by implicit means. The objection to the latter procedure, of course, is that it may not be right to assume that past rates of inflation will continue to apply. Thus, with the benefit of hindsight, we can say that it would have been wrong to use inflation rates from the 1970s in making claims projections during the early 1980s.

General procedure for making inflation adjusted projections is described with examples in §J. At this point, it is sufficient to observe that to treat inflation explicitly two basic questions have to be answered:

a) What historical rates of inflation are embodied in the data?
b) What rates are most likely to apply in the future?

In tackling the questions, it is important not to assume that RPI is the only way to measure inflation. It is *claims* inflation, not general price inflation, that we are addressing. Claims inflation, in fact, is likely to vary with the class of business. Thus, for motor repairs, claims inflation might be expected to keep pace with inflation of skilled manual earnings. For repair to buildings following fire, some index of construction costs might be used.

Again, court awards in damages cases are a law unto themselves so far as inflation is concerned — the right kind of specialised information should be sought. (Such inflation is sometimes termed "social inflation", since it depends mainly on attitudes and opinion in society rather than on strict economic factors. Price and wage inflation, in contrast, are types of economic inflation.)

The Underwriting Cycle

General economic conditions obviously affect the demand for insurance, and the level of premiums which the market is willing to pay. For the insurer, such conditions effectively make their mark through the underwriting cycle itself. As noted in §C3, a feel for the cycle and its current phase will be helpful to the reserver in making loss ratio projections.

Investment Conditions

Another economic factor of great importance to insurance, of course, is the state of the investment market and the terms on which insurance funds are invested. The rates of interest and dividend payable in the markets on short to medium term investments can affect profitability a great deal. From the reserving point of view, however, investment conditions only come into play when a decision to use discounted reserves has been taken. The norm in Britain is not to use discounting, although there are distinct advantages actuarially speaking. In the event that discounting is used, the chief influence on the eventual reserve will be not so much claims inflation itself, but rather the *gap* between inflation and the appropriate investment rate of interest.

Currency Exchange

The final major economic factor to be mentioned is currency exchange rates and their variation. This aspect particularly affects reinsurance and the London Market, with its large volume of international business. The Market does have three standard denominations for accounting purposes namely £ sterling, US$ and Canadian $ although risks are written in many different currencies. But risks underwritten or transferred can be such that while premiums are payable in one currency, claims are payable in quite another, non-standard currency. A common example would be of repairs to a ship while in waters foreign to its country of origin, or of a court case pursued in some foreign jurisdiction convenient for the insured's purposes

Classes of business showing such characteristics present grave difficulties for reserving. Not only are currency movements erratic and almost impossible to predict, but the proportion of claims in each given currency may be unstable into the bargain. The only rule that can be followed is, wherever possible, to separate out the business written in the different currencies. Failing that, the reserver must at least make clear the assumptions being made about the proportion of claims to be expected in each currency under review.

[C6]
LEGAL, POLITICAL & SOCIAL FACTORS

This section deals with influences on the reserving position under the following headings:

Legislation	Attitudes to Compensation
Court Judgments	Trends in Behaviour & Awareness

Legislation

New legislation, or changes in laws and regulations, can cause discontinuity in the claims experience. An example of recent years has been the seat belt legislation, making it compulsory (with certain exceptions) for drivers and passengers to wear safety belts. The effect has been to reduce the severity of many of the injuries suffered in road accidents, thus making for a change in the claims pattern in motor business. The major part of the change would be expected in the third party injury claims, probably settled at a duration of two years plus.

At the time of a legislative discontinuity, the extent of the influence on the claims pattern may be difficult to predict. But some reasonable allowance can be made, and subsequently checked against the emerging experience. Also, as time passes, the presence of the discontinuity will come to be viewed as a historical fact. Hence when the affected experience is used in projections, any necessary adjustments can easily be made.

Generally speaking, legislation is so drafted as to apply to future events and occurrences only. Hence new legislation will not usually affect claims on the business written to date. This is a great help in claims reserving work. However, the reserver should be on the look out for Acts that may have a retrospective effect, or that may require to be put into immediate effect in new court decisions. In such cases, some adjustment to the reserves for business already written may be needed.

Court Judgments

Court judgments can be wide ranging in their effects on claims reserving. A good example is the ruling given in the High Court at Newcastle in 1983 on the subject of industrial deafness cases. Since 1973, there has been an obligation for manufacturers to provide earmuffs for all employees working in conditions of excessive noise. Any employer failing in the obligation is clearly liable for damages if an employee begins to suffer deafness as a result. One question the Court faced was as to whether any liability should be deemed to hold in similar cases occurring before 1973. The judgment given was that liability should apply in cases arising in the 10 year period prior to 1973, but not earlier. A practical

back-stop was therefore set, preventing the re-activation of very old employers' liability contracts.

A further aspect of the Newcastle judgment was to establish the quantum of damages in industrial deafness cases to an amount in the region of £2,000. The effect for insurers was to set firm limits for this particular liability. Generally speaking, a reduction in reserves already set aside became possible.

Attitudes to Compensation

The level of damages awarded by the courts in compensation cases is an important factor for claims reserving. Because of changing attitudes in society, awards will tend to escalate in time, often by far more than the normal amount of price or wage inflation. As already mentioned in §C5 above, the phenomenon is sometimes called "social inflation". It is probable that this type of inflation will not be smooth, but will move by sudden steps upwards, as the result of particular judicial awards.

In compensation, the amount of damages is one aspect, but not the only one of importance. Courts also face the prior question as to what accidents and occurrences can actually be allowed to qualify for compensation. Lines have to be drawn to determine the conditions under which liability is established. But the position is not a static one, and in recent years there has been a move to widen the bounds a great deal. This is particularly true in the USA, and cases have been won for substantial damages even where injury has occurred entirely as a result of the plaintiff's own irresponsibility.

We can, therefore, detect a shift in society's view of the obligation borne to injured parties. Although the shift has not been as great in Britain as in the USA, there has been an undoubted raising of the stakes. Categories such as professional indemnity have been particularly affected, with premium rates increasing many times over in a short space of time. For the insurer the problem comes where the new rates of compensation are applied to business written at the old rates of premium. Reserves for the old years have to be strengthened to meet the new conditions, and the reserver must assess how far the trend seems likely to continue in future years.

A related point is that claim settlements negotiated out of court will be much affected by the current level and tenor of court awards.

Trends in Behaviour & Awareness

General trends in behaviour in society may have their effect on insurance claims. Connected to the above discussion on damage awards, there is the matter of what might be termed the "propensity to claim". As the general public become more aware of high court awards and new circumstances in which claims can be made, so the frequency of claim will rise. A good example comes from the area of industrial disease. Thus, there is by now a general awareness of the dangers of asbestos, and those who have worked with the substance will be far more likely to claim should the related symptoms appear. Also, apart from the action of claiming itself, the public may become more ready to take legal action if the claim is not fully satisfied.

The claims picture can clearly be affected by such trends as a general increase in the crime rate, or towards arson as a cause of industrial fires. Usually, such changes will be gradual, taking place over a number of years. They will therefore only gradually reflect themselves in the data and the projections. Such changes do not normally require any remedial action. It is the sudden shift which will throw out the estimates, and which the reserver should be on guard against.

[C7]
CLIMATE & ENVIRONMENTAL FACTORS

The term "environmental" is here intended to include the man-made as well as the natural environment. The main headings are:

Vagaries of the Weather
Catastrophes
Latent Hazards

Vagaries of the Weather

We can distinguish effects resulting from fluctuations in the weather a) between years, and b) within one given year. To take the variation between years first, this can result in different claim settlement patterns arising. An example would be in householders' insurance, which can be disturbed by claims for subsidence. Such claims can be very substantial ones, but they will be concentrated in years in which very long dry spells of weather occurred. One solution would be to remove all such claims from the data for the business group, and to treat them separately for reserving purposes.

On weather fluctuations within a given year, the greatest problems are produced by variations occurring just before the accounting date. 31 December is an unfortunate choice of accounting date from this point of view, since it comes towards the end of the Christmas holiday period. A sudden freeze in the latter part of December will produce a rash of claims, most of which will not be reported until the new year. Hence an IBNR liability arises which will be quite different from the pattern of those years in which there is no Christmas freeze. To establish the correct reserve, we need to have data on the claims pattern which normally follows a freeze, probably on a week by week basis. Annual or even quarterly figures will not be adequate.

Catastrophes

The reserver may need to give special consideration to any natural or man-made catastrophes, caused, for example, by hurricane, flood, earthquake or explosion, giving rise to claims on the insurer. The existence of any catastrophe that has occurred before the accounting date should be known to the reserver, and by the time the accounts have to be completed it will usually be possible to make a reasonable assessment of the gross cost of the claims incurred by the insurer. Often a large part of the gross cost will be recoverable from reinsurers, provided that the terms of the reinsurance contracts are satisfied and the reinsurers are able to pay. The need to consider making provision for bad debts in respect of possible non-recovery from reinsurers may be especially important in the context of catastrophes.

In the guidance given to British insurance companies on accounting for insurance business, it is stated that the potential requirement for an unexpired risks provision should be assessed on the basis of information available as at the balance sheet date. Claims events occurring after the balance sheet date in relation to the unexpired period of policies in force at that time need not therefore be taken into account in assessing the need for an unexpired risks provision if they were not capable of prediction at the balance sheet date. Where material, however, post balance sheet claims events should be disclosed in the notes to the accounts, together with an estimate of their financial effect. Making such an estimate may well be difficult in the case of a catastrophe that occurs very shortly before the date on which the accounts have to be finalised.

When the past claims experience is being used as a basis for forecasting the future, data relating to catastrophes will produce distortions. The usual approach is to try to eliminate from the data all claims resulting from catastrophes before making projections, and then to add on an allowance for the catastrophes that must be expected to occur in the future.

Latent Hazards

Perhaps more disturbing than immediate catastrophes, from the claims reserving point of view, is the possible existence of latent hazards. In recent years, the most notorious such hazard has proved to be asbestos. The problem is that an exposure to asbestos can result in debilitating or fatal disease perhaps 20 or even 30 years later on. But the danger was only fully demonstrated by research extending into the 1970s. Employers' liability rates on contracts written in the 1950s, 1960s and earlier could not be expected to contain provision for the hazard. Nevertheless, as time went by, the courts enforced awards based on these old exposures. The result is that substantial extra reserves have had to be set up by the insurers concerned.

One strategy, adopted particularly in the USA, has been to change liability contracts from an occurrence to a claims made basis. The latter type of contract may ease the reserving problem by limiting the IBNR provision. But it has its own disadvantages, and has not yet gained great popularity in Britain for UK risks.

In the meantime, the question that has to be faced is whether any more shocks comparable with asbestos are in the pipeline. Among chemicals, benzene has been mentioned as a possible long-term hazard, and there are other candidates. VDUs (Visual display units) are in such common use today that any proved capacity to cause disease would produce a very substantial liability for insurers.

Finally, environmental pollution has been a subject of some concern, particularly since the Love Canal case in the USA. The twentieth century has undoubtedly seen the disposal of harmful industrial wastes on a vast scale. If damage claims can be established against the companies concerned the eventual scale of liability could be very large indeed.

To sum up, it is quite impossible to make proper provision against hazards which are completely unknown. The point is to be aware of any impending threats, so that corrective action for reserving can be taken at the earliest reasonable time.

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