

RISK EXPOSURE IN THE LONDON MARKET

General Insurance Study Group 1989

This paper examines exposure to insurance claims within the London Market & Lloyd's environment. A comparison is first made with direct non-life insurance then the more specific problems of the London Market are emphasized and possible solutions discussed.

Other types of exposure such as asset failure, reinsurance failure, expense escalation, etc... are not covered.

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1) Introduction

1.1 What do we mean by exposure?

The insurer, or reinsurer, accepts a premium. In the future he may have to pay one or more claims. His exposure to pay these claims may be considered in various ways. Indeed, even for the same risk the exposure may have differing values depending on its usage, eg. sum insured, probable maximum loss (PML), written line amount times number of reinstatements + 1, or even risk premium. So for one risk, several values of exposure may be needed.

Exposure may have different meanings. These include the maximum possible claims cost, the probable claims cost, and the probable claims cost given the occurrence of a specific event.

Exposure may have differing uses depending on the type of risk. In a working layer, where some claims are expected, a claim frequency distribution will be used to obtain the expected number of claims as clearly it is unlikely for all risks to become claims at once. An average expected claim size will be used. Conversely, at a high level catastrophe layer the frequency is either 0 or 1, and in the event of a claim, a total loss is normally assumed.

i) Life

In life assurance there is generally little problem. The exposure can be obtained by adding up the sums at risk on lives in each age group. There is normally a fair degree of independence, although consideration must be given to the maximum sum assured per life and to an accumulation of risk, eg a group of heavily insured key executives travelling together on one plane, or an explosion at a factory under a group life scheme.

The probability of a claim has been well researched with the resultant publication of mortality tables, and with improving mortality an inbuilt safety margin normally emerges for assurance business. Death is easy to define and a claim is normally for 100% of the sum assured, absolute and one off.

So the expected amount to be paid in claims during the year can be estimated with a fair degree of accuracy. However there is still a need for some measurement of exposure to accumulations of claims, eg at risk for AIDS, lives assured in an earthquake zone ,...

ii) Non-Life

There is less clarity in direct non-life insurance. A claim can be total or partial, multiple claims are common. A claim does not normally terminate the policy and the description of what constitutes a claim, and even when it occurs, can be difficult.

The measurement of the exposure is not normally easy. For some types of cover, eg. fire, there is a probable maximum loss, or PML, in addition to the overall total sum insured. The sum insured often differs from this probable maximum loss. The PML is introduced so that for an individual loss the estimated maximum damage can be assessed, as often circumstances cannot reasonably be imagined where the whole sum insured would be payable in the event of one loss occurrence. However, this PML may be exceeded.

Moving from property to direct liability insurance the situation again becomes more complicated. The claim is less tangible and more subjective. The amount of the claim is more difficult to measure and the definition of what constitutes an event, and when it occurs, presents severe legal difficulties.

Finally these non-life risks enter the realm of reinsurance. Measurement of physical attributes becomes impossible. Excess of loss reinsurance (and LMX to take the extreme position) renders the original individual risk almost meaningless because of unavailability of data. Before any loss occurs, the risk is too distant and hard to get a feel for. (After a loss occurs and notifications have been made, it becomes easier to assess.)

For a book of treaty reinsurance there is a similar item to the PML in direct fire insurance. The PML may be in respect of catastrophes such as earthquakes, hurricanes, major floods or bad winter weather, ie a freeze. The PML's (eg for earthquake and hurricane) may differ, even on the same book. This arises for 2 reasons. Firstly, the original business will often comprise policies with an option to purchase cover for earthquake or hurricane damage which may or may not be exercised. If one is purchased and not the other then clearly the exposure differs. Secondly the estimated damage from a hurricane may differ from an earthquake, eg there is more advance notice of the impact of the former, and the types and areas of damage suffered will vary.

For non-life insurance the accuracy in the measurement of the expected amount to be paid in claims varies tremendously from direct to reinsurance.

1.2 Why bother to measure exposure?

There are several reasons why it is necessary to measure exposure. Different methods of measurement will be used, depending on the reason for measurement. For underwriting and reserving more importance is attached to PML exposure whereas for outward reinsurance the potential maximum loss (or the sum insured) is likely to be a more useful measure. In addition, exposure should be considered at the varying levels of reinsurance, eg. gross, net of facultative reinsurance, net of facultative and proportional reinsurance, net of all reinsurance.

In essence, exposure is measured so that the reinsurer can assess his loss from particular events, or so that some factor(s) can be applied to the measure of exposure to produce a premium.

i) Outwards reinsurance

Most aspects of assurance and insurance require a decision to be made whether to retain the risk or reinsure part of it outwards. If an accurate measure and analysis of the exposure is available then a correct decision is more likely to be made. The exposure measurement will relate to the whole book of business, as the effect of an accumulation of losses from a single event or scenario is being assessed.

ii) Reserving

The expected ultimate premium income for an underwriting year is normally fairly easy to estimate. The future claims outgo is less so, especially for longer tail business. Accurate details of exposure, and the comparison with the premium, can be an excellent first step in anticipating the likely ultimate underwriting result, even before any claims have appeared.

For example if a particular category of business in 1986 has income of £1m and anticipated claims outgo of £0.75m then the result is a 75% loss ratio. For 1987 if premium income doubles to £2m but our analyses show that our exposure has trebled then other things being equal, claims of £2.25m will result, giving a loss ratio of 112.5%. Clearly any major change in the portfolio would lessen the value of this calculation.

iii) Underwriting/Pricing

When an underwriter is shown a risk, he considers many factors in deciding whether to accept or decline. If he has full details of his current exposure, he may consider to decline to avoid over-exposure to a certain catastrophe. He will normally try to create a balanced portfolio.

For example if the underwriter writes USA Non-Marine business he will wish to know how much property business he writes in California so that a possible earthquake will not give rise to accumulations of claims in excess of the limits of his excess of loss reinsurance programme.

The underwriter will be assessing the price of an individual risk. Is it too cheap or reasonably priced? A measure of the exposure relative to the price may be calculated to help the underwriter come to a decision. He will also consider a number of other factors. What is the effect of the proposed size of line on his reinsurance programme, what deductible is there, the size of any reinstatement premiums,...? The decision eventually taken will be balanced against many factors of exposure.

iv) Miscellaneous

Matters often arise that necessitate a measurement of exposure. Until the late 1970's, few companies retained any reserves for the payment of latent claims such as DES, asbestos, silicosis and pollution. When the claims began to emerge it quickly became clear that normal projection methods were of little use. One approach was to examine all the risks from which claims were likely to emanate, to obtain a measurement of the exposure to these latent claims. Some estimate of the maximum ultimate impact could thereby be obtained and the cost to the insurer under various scenarios could be estimated.

1.3 What problems can arise in the measurement of exposure?

The main feature that upsets any measure of exposure is heterogeneity of risks. The summation of different types of exposed unit can be very misleading. However truly homogeneous risks are rare so some kind of compromise must be made to enable a reasonable summation of exposure in as few categories of risk as possible.

If it is decided that no alternative exists but to base exposure on some kind of premium measurement then the position within the underwriting cycle must be taken into account. For certain types of business, the rate of inflation may also be relevant. Some adjustment is therefore needed for year on year comparison. This will inevitably be subjective and prone to error.

Another problem arises with horizontal exposure, eg. for a reinsurance excess loss risk where a number of losses can occur. It has to be decided how many losses to assume to arise from a single event. If earthquake exposure is being measured then 3 or 4 losses may be deemed reasonable on a high layer risk excess cover, or there may be a limitation per event (or limited number of reinstatements) in the policy wording.

Summing the measurements of exposure may be on an underwriting year basis (with a projection of likely future exposure yet to be written) or on an in force basis, depending on the reason for the measurement. Care must be taken that the correct total is used.

2. Exposure in direct non-life insurance

2.1 Personal Lines

This business encompasses the domestic household and private motor business. Losses are almost always fairly small and the risk becomes one of claim frequency rather than severity. The exposure is therefore based on numbers of policies. Grouping of types of policies will be made by hopefully homogeneous risk factors. For premium rating, the claim size will be affected by some inflation factor, eg. RPI, cost of motor repair, house building index, etc... Attention will be paid to trends, such as fluctuation in loss frequency and increases in severity. The large numbers of small risks preclude thoughts of measurement based on vehicle miles, PML's, value of buildings/household contents etc...

The only complications are the infrequent third party liability claims and catastrophe perils such as flood, earthquake, windstorm, etc... However allowance for these can readily be made, and the reinsurance programme is normally sufficiently comprehensive for these to present little problem.

This represents the most simple case of non-life insurance.

2.2 Commercial Insurance

Larger property and liability insurance risks are types of commercial insurance. These include motor fleets, consequential loss, products/public/employees liability,... These larger more complex risks give rise to a greater distribution of claims by size, more difficulty in claim definition, and present more of a problem in the measurement of exposure. The premium rating will be dependent more on the probable maximum loss than the total overall value of the risk. Other measurements of exposure are also necessary, eg vehicle miles, turnover/sales/profit, number of employees,... In addition to the pure indemnity of the loss, there will be the inherent legal expenses.

Premium rates will be affected by the cycle caused by the interaction of demand and supply more for commercial business than for personal lines. Negotiation by the insured or broker will assume a greater significance.

However, although more complicated than for personal lines, measurement of exposure presents a surmountable problem given adequate records at the underwriting stage.

Consistency in methods of measurement is so important and this will enable fairly accurate comparisons year by year, and thereby a good indication of the degree of increase/decrease in exposure.

Even here though the exposure is dependent on social factors, eg. size of court awards, litigiousness,...

3. London Market & Reinsurance

3.1 London Market Direct

Some London Market business is direct insurance and similar data to that for commercial insurance may be obtained. This would include a large proportion of Marine and Aviation business and the category of Non-Marine which is written through MGA's (Managing General Agents) known as binder business, where the underwriting authority is delegated, within certain constraints.

The London Market also contains some direct motor.

3.2 London Market Problems

For reinsurance generally and for London Market in particular there is a significant problem caused by the remoteness of the reinsurer from the original insured. The data obtainable is limited and often unreliable. If the reinsurer requires further data he normally will not be able to get it. The result is that the methods of measurement of exposure as used for direct insurers are inappropriate. Techniques and quality of measurement are normally less precise.

The London Market comprises a great variety of risk and method of reinsurance and hence produces a problem of standardisation of method. Many factors must be considered if the exposure is not to be misleading and inaccurate.

3.3 Breakdown of Data

The initial step in the measurement of exposure is the sub-division of the data into categories with similar characteristics. The natural initial sub-division is between Marine, Aviation, Non-Marine Property and Non-Marine Casualty. In view of the need for measurement of exposure the direct business should then be extricated. The remaining reinsurance business can then be split by the types of cover, eg. LMX, facultative, other proportional, other non-proportional,...

3.4 Need for Measurement

Comment was made in the introduction about general uses of exposure measurements. There is a great need for some sort of measurement in the London Market for the following reasons:-

- (i) Claims develop slowly and often the actuary will be reserving before any claims have been paid and sometimes before any outstandings have been notified. A measurement of exposure and premiums received is all he has for the recent underwriting years.
- (ii) In view of the volatility of L.M. business, a risk or treaty may pass from profitability to loss making in a very short time. Some early warning of this is necessary. How many companies and syndicates would have amended their underwriting in the early 1980's if they had some indication of the results after 12-18 months instead of many years?

- (iii) London Market companies often have extensive and expensive reinsurance programmes. It is clearly dangerous to purchase insufficient reinsurance and a waste of money to create an outward reinsurance programme in excess of any possible exposure. By considering the potential exposure the correct reinsurance programme may be perceived, and hopefully purchased.
- (iv) Many US casualty risks, especially those written between 1960-1980 have potential for unforeseen and latent claims. Even though coverage for these types of claims was often unintended, payments have been made, if only for legal expenses.

It is therefore important that the actuary has a feel for the future potential of these claims. This can be obtained by measuring the exposure under specific assumptions, eg. to take an extreme that every risk of a particular type is a total loss.

The actuary will be making specific assumptions often outside the realm of his training. The legal arguments over what constitutes an event or an occurrence, and if commercial general liability policies cover environmental pollution clean up costs, are far from being resolved. It is important for the assumptions made to be clearly stated and consistent.

- (v) If a major catastrophe occurs, LM companies have two considerations:-
 - (a) What is the effect on a gross basis?
 - (b) What is the effect net of all reinsurance recoveries?

The ultimate gross loss can only be ascertained if a sound measure of exposure is available. The net effect of the catastrophe is the bottom line or the eventual effect on the Company. However, the gross effect is very important. Reinsurance recoveries may take many years to collect and the company will be funding on a gross basis in the meantime. Even worse, some of these recoveries may be unobtainable because of reinsurance company failures.

- (vi) When a risk is initially being assessed by the underwriter he considers whether the rate, or price, is sufficient. Clearly this relates to the exposure. A more accurate measurement of exposure will enable a better assessment to be made.
- (vii) The current regulatory solvency requirements relate the shareholders funds plus retained profit (or Names' deposits in the Lloyd's market) to the premium written. Clearly if the premium has remained constant and the exposure has increased then the solvency position has weakened. A more accurate measurement of exposure than the premium would benefit any measurement of solvency of the company/syndicate.

3.5 Specific London Market Uses

- (i) As mentioned in 3.4(i) above, some attempt must be made at reserving an underwriting year before claims develop or even emerge. It is also important to maintain consistency in reserving standards between underwriting years.

Assume for 1987 for a particular class of business that the ultimate loss ratio (ULR) is reserved at 75%. For 1988 the premium income reduces from \$12M to \$10M and a similar PML exposure increases from \$195M to \$200M; then it may be reasonable to make the initial estimate for the 1988 ULR at 92.3%.

However, the above example only relates to the attrition loss ratio, ie it fails to consider the effects of larger losses.

Using the same example, if we project the effects of 87J (the 1987 European Hurricane) to be a net loss of about \$1.2M (ie 10 points of the ULR) and for 88J (1988 Hurricane Gilbert in the Caribbean) to be a loss of about \$0.5M (ie 5 points of the ULR) then a net projected ULR of 85% results (ie. the attrition losses are projected separately from the catastrophe losses).

Hence although the exposure is clearly a very useful measure it must be used properly and take other factors into account.

- (ii) It was mentioned in 3.4(v) that the gross effect of a major catastrophe is important as well as the net effect. However, the exposure involved will not be for just one particular class but for a particular geographical area. If the effect of a Californian earthquake is being assessed, then the exposure for the Californian earthquake zone is required, not that for all USA. Unfortunately for practical reasons the effective exposure will be the sum of that for California, plus a proportion of USA nationwide and even plus a proportion of worldwide.

Many Companies and syndicates perform scenario tests, e.g. the effect on the Company of a \$10bn Florida hurricane. For this purpose a measure of exposure by geographical area and type of business can help to produce a much more accurate answer.

Of course this measurement relates to static losses (eg. Non-Marine property, Marine rigs, etc...) and not to mobile risks such as ships and planes where other assumptions are necessary.

The total exposure will indicate the maximum limit of reinsurance protection needed.

- (iii) Following on from above, there may be two or more catastrophes occurring in one year. The measurement of exposure will have one important difference. For the second loss a summation of just the limits will not produce the correct answer. Attention must additionally be paid to the second loss provisions of the risk. This means the exclusion of risks with no reinstatement of liability in the event of a loss and the inclusion of risks where the first loss is not covered but subsequent losses are, eg. back-up policies.

4. Measurement of Specific Types of LM inwards property business

In this section separate categories of London Market property business are discussed. Clearly an amount of judgement will be necessary, resulting in different assumptions by different actuaries. However, given a reasonable and consistent set of assumptions, the comparison by underwriting year should result in a useful measurement.

Often the exposure of an individual risk reflects the subjective opinion of the underwriter. He will consider the underlying types of risk in the book and the general nature of the book, including the profile of business written and past loss experience. The layer covered may be a working layer with losses expected in every year (and priced accordingly), or a high layer catastrophe risk with losses occurring only in an exceptional year. The original insured premises may be solid well constructed commercial properties or more flimsy domestic homes. Clearly the PML presented by the cedant will be evaluated.

Some risks contain limitations to the type of loss, eg. excluding windstorm. When aggregating exposure to different types of loss, these risks should be excluded where necessary. Alternatively, some reinsurance risks may carry a different PML for windstorm/earthquake. Due allowance should also be made for these.

Some accumulation of exposure by category of business will eventually be performed. However, sometimes the categories must be kept separate, eg. where the reinsurance protections are limited to certain types of business (often LMX is excluded and has its own reinsurance programme).

4.1 Catastrophe Excess of Loss Treaty

This reinsurance will be triggered when the accumulation of losses arising from one event exceeds a certain amount. At the lower levels, several losses may occur in one year, eg in 1985 Hurricanes Elena and Gloria plus the Mexican earthquake. At the higher end no payment will be made except when an extraordinary catastrophe occurs, eg European Hurricane in 1987 or Hurricane Alicia in 1983.

The measurement for an individual catastrophe loss is fairly easy. For example, if the insurance risk for a hypothetical loss greater than \$20m to the cedant is for \$10M excess of \$10M and the line is 5% then the maximum first loss exposure is \$0.5M although the risk may have some aggregate deductible. Against this exposure may be set any premium paid by the cedant to reinstate the policy for further losses although conversely the outward reinsurance reinstatement premiums must be added to the exposure (allowing for any reinstatement premium protection policies). By summing all these exposures by geographical zone the aggregate exposure for an individual specific catastrophe loss may be found.

It is so important to appreciate the level of the insurance. A \$10m layer excess of \$10m for a small cedant may have an effective exposure quite different from a \$10m layer excess of \$100m.

For the second loss in the year, those risks without the provision to reinstate are excluded and back-up policies included. The resultant aggregate exposure will be very different. And so on for further losses.

The main use of this measurement will be for calculating the effect of a catastrophe loss gross and net. The net effect will take into account the outward reinsurance programme, both proportional and non-proportional, but retaining the lower limit of the reinsurance programme, aggregate deductibles, placement shortages and co-reinsurance.

4.2 L.M.X.

London Market Excess of Loss is basically treated in the same way as catastrophe excess of loss. However, no geographical analysis is normally available for the exposure. Indeed, the business will normally comprise a large variety of underlying business with the barest of information supplied, eg. whole account including/excluding LMX, excess loss of excess loss, etc... Much of this LMX business is likely to be a total loss for a major catastrophe.

Other retrocession business assumed may be treated likewise but a better geographical measurement of exposure will be available.

4.3 Risk Excess of Loss Treaty

This will be triggered when the payments on one individual loss (eg a factory fire) exceed an amount. Normally the lower limit is much smaller than for a catastrophe. Frequency of loss therefore becomes more important. There will often be an occurrence limit, eg. for \$0.5M excess of \$0.5M the occurrence limit may be \$2.5M or 5 losses.

So for measuring the exposure, this occurrence limit may be used. However, sometimes there is no occurrence limit (especially in a soft market) and an assumption has to be made, eg. 4 losses per event. Then a measurement of exposure for inward risk excess of loss business for one catastrophe may be calculated.

The risk excess of loss may be of two differing types, less than or greater than PML. Clearly in this example of \$0.5m excess \$0.5m the nature of the reinsurance changes if the maximum PML is \$1m (within PML and therefore a working layer) or \$0.5m (where any loss covered will be beyond the PML and therefore exposed only to a clash of risks), assuming the PML's have been correctly assessed.

For a second catastrophe the same exposure may normally be assumed. For higher limits there is sometimes an overall restriction, eg by a limited number of reinstatements. Due allowance must be made for this.

As for catastrophe excess of loss, any exposure measurement will be by geographical zone.

4.4 Proportional Treaty

For proportional business there is sometimes a given aggregate per occurrence but often not. If not, then it is helpful if the underwriter can make some estimate of aggregate exposure per occurrence at the time of accepting the treaty risk. He may be able to obtain useful information from the broker or even the ceding company. He may know other details of the cedant's programme.

The underwriter will examine the original rating of the in force business. He will produce a geographical exposure. The PML will be compared with similar treaties to see if it is realistic and reasonable.

If no estimate is given then problems result. It is therefore worth trying to make this a compulsory data entry by the underwriter.

This type of business represents the most difficult from the point of view of exposure measurement. The underwriter will have no real idea of the unknown/unlimited nature of horizontal exposure. A pure quota share has less scope for adverse selection but a surplus treaty or facultative/obligatory quota share could lead to the reinsurer's experience being far worse than that of the cedant. It is so important for the underwriter to attempt a view of estimated aggregate exposure for proportional treaty business and yet so often the underwriting of this business is delegated to the more junior and inexperienced underwriters.

Even if exposure data is not available it is still sometimes possible to obtain a feel for the effect on a proportional treaty from a catastrophe. Whole market data is produced in the U.S.A. by Best's Insurance Services, split by type of business and State. The likely effect on a Direct U.S. insurer can thus be found and hence the knock on effect to his reinsurers.

4.5 Binders

Binder business comprises risks where the underwriting authority is passed from the insurance company to a MGA (Managing General Agent) but the company retains the risk. However, some control is retained as the MGA has a limit to the income he may write, his rates must be agreed by the company and regular flow of data enables a swift assessment of the premium income position at any time.

The MGA's are normally rewarded by a commission on the income they write rather than the experience, so particular care in monitoring is necessary. The business is written for a practical reason; the company would otherwise be unable to write that class in that country.

Binder business is direct business and can be treated as such for exposure measurement purposes. The risks are normally personal lines or small commercial ones and methods as indicated in section 2 are applicable. Information such as number of risks per binder, average sum insured and even individual policy details are often readily available and easily transferable by computer diskette.

4.6 Lineslips

This category is often linked with binders but the main difference is that the underwriting authority is delegated to a leader who is a London Market company or Lloyd's syndicate and thus retains some of the risk. The business will normally comprise larger risks than for binders. Whereas binders are for direct business, lineslips are also for reinsurance so methods for types 4.1, 4.3 or 4.4 are appropriate.

4.7 Facultative

Whereas with treaty reinsurance a "book" of business is being written, a facultative underwriter accepts an individual risk on its merit. Of course, the risk may be a multinational company or something much smaller. The information is therefore more detailed than for individual risks within a treaty and a more accurate exposure may be calculated by the underwriter and used in any measurement.

5. Measurement of Specific Types of LM inwards casualty business

With property insurance, a tangible risk has a loss and a claim is normally made to replace the property, or part thereof. For casualty, or liability, insurance the whole proceedings are far less tangible. The amount of loss is often awarded by a court and similar claims may have very different amounts awarded and even diverse judgements given.

However, whereas an event can have catastrophic repercussions in the property insurance market, the main fears in the casualty market are normally for a high frequency of separate losses or several events with accumulations of claims affecting the catastrophe clash book of business; although scenarios can be envisaged where a large catastrophe loss impacts the casualty account severely and losses may exceed those from the property account, eg. an earthquake occurring during the working day. The long tail nature of the risks further exacerbates the problem.

- i) The main use of exposure in casualty business is made at the underwriting stage. For Medical Malpractice the underwriter will wish to know the number of beds in a hospital or the number of doctors of a particular type (eg general practitioners, gynecologists, ...) in a physician's programme. Similarly for lawyers, architects, etc... the underwriter will wish to know details of the income for the practice and a profile of the types of professional. For more general reinsurance the data is less precise and problems of the type relating to property in section 4 arise. There is normally less scope for very large accumulations of loss (although sometimes seemingly separate losses are deemed to be one event or aggregated into a small number of events, eg. thalidomide, DES, asbestos,...)
- ii) Another use of exposure is at a later stage of claims development. Events unforeseen at the time of underwriting may arise. Some idea of the possible quantum of these is often required. Examples of this include asbestos-related claims, environmental pollution,...
- iii) Although a catastrophe such as a California Earthquake might be expected to impact just the property account, some effect will inevitably be felt by the casualty account also.

The WCA (Workers Compensation) book and the Motor X/L account would clearly be hit if employees were killed at, or travelling to/from, their place of work.

The destruction of buildings would impact the commercial general liability policies and also the professional indemnity of architects and engineers. Specifically a hospital being affected could impact the medical malpractice book, eg. destruction of hospital and injury to patients, loss of important supplies of blood, plasma, and even loss of medical records.

However, it is clearly unrealistic to assume that more than a proportion of the exposure in that geographical zone would be affected. This proportion would vary by class of business and level of insurance.

6. Conclusion

Exposure definition and measurement is essential in any form of assurance, insurance or reinsurance for a full assessment of the risk involved. For some classes it is easy to obtain a reliable estimate but for London Market business, any measurement will be fraught with difficulties and the result often not accurate. However, by performing consistent measurements a useful comparison is obtained. In other cases a measurement with an acceptable proportion of crude approximation does at least provide some assistance if used cautiously.

It is clear that anyone trying to produce an accurate measure of exposure cannot rely on the data normally available. Two educational processes are necessary. The first and easier is for the underwriting data stored and computer systems to be adapted to produce the best from available data. The second is for pressure to be put on brokers and cedants to provide more useful information.

There are many different possible approaches to this subject and emphasis given on specific points may differ considerably depending on individual taste. The working party has tried to be practical in reviewing the problem from a current London Market position whilst trying hard to keep the paper short, self-explanatory and readable.