

Household Rating

Clive Bolton (Chairman)
Andrew Button
Edward Levay
Richard Pater
Craig Pettengell
James Rakow
Philip Webb

1. Introduction

1.1 Rationale

To discuss topical issues in the household line and explore possible scenarios of the future.

1.2 Subjects Considered

The Claims

- ☐ To what extent does GHASP data explain the subsidence claim experience and is it suitable to be used for premium rating?
- ☐ Will flood assume the same importance as subsidence and what information is available to help rate a particular area?

The Premium Rates

- ☐ What rating factors are currently used and how is this likely to develop?
- ☐ To what extent can lifestyle information be used to identify profitable and unprofitable business?
- ☐ Are sum insured and number of bedrooms adequate measures of exposure for buildings risks?
- ☐ How should actuaries respond to the issue of redlining?

The Market

- ☐ Is there any consensus in the market on the differential rating for areas of high subsidence or flood?
- ☐ What are the topical issues for block business?

2. The Claims

2.1 Subsidence

Q : To what extent does GHASP data explain the subsidence claim experience and is it suitable to be used for premium rating?

The GHASP System

The GHASP system was first described in the 1992 working party paper. It was developed by the British Geological Society to provide information on the geological makeup of an area and the susceptibility to subsidence. The geological hazards considered are :-

- Clay
- Landslip
- Solution
- Mining
- Gulls
- Compression

For a given postcode sector the risk from each of the hazards is estimated by combining three aspects :-

Area	The proportion of the sector that is affected (E.g. 90%)
National Weighting	The overall level of risk from this hazard (e.g. clay represents the highest risk and is given a weighting of 1.0, at the other end of the range gulls are given a weighting of 0.3)
Local Weighting	This factors in local conditions using a range 0 to 1 (e.g. it may be that there is a high proportion of clay but the water table is high reducing the likelihood of it drying out).

Experimental Design

The objective was to test if the risk statistic for each of the 6 hazards could explain subsidence claim experience. BGS provided information for the postal districts of

Harrow, Medway and Guildford and this was combined with subsidence claims data from insurance companies. For the 209 postal sectors there were 138,525 policy years of exposure and 609 claims .

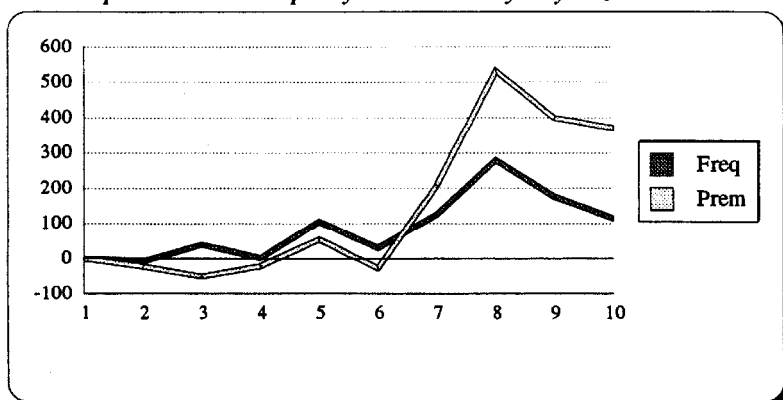
The data was analysed using GLIM and both frequency and risk premium models were investigated.

Results

Preliminary results were presented at the 1993 Conference. Since then more insurance company data has been collected. The main findings are :-

- ☐ Only the clay hazard statistic gives stable results.
- ☐ Frequency increases in line with the hazard statistic. Severity, on the other hand, is much higher where the hazard is greatest. This may be due to the increased likelihood of total loss.
- ☐ Landslip and gulls were also statistically significant but claims cost did not increase as the hazard statistic increased.

Graph 1 Relative Frequency & Risk Prem. by Clay Hazard Level



Conclusion & Further Development

The GHASP system is useful for giving an indication to the subsidence risk by postcode sector but there is still a significant amount of unexplained variation. Many other aspects affect the likelihood of a claim, some of these could be built in to a database but others can only be discovered by surveying the property :-

- | | |
|-------------------------------|---|
| Resolution | GHASP only contains information at postcode sector level. However GHASP 2 can identify the geological information down to a much lower level. |
| Water table | Other geological factors such as rainfall and the level of the water table must be considered. |
| Method of construction | Clearly the way in which a house is built will have a profound affect on the likelihood of subsidence. |
| Trees & Drains | The proximity of trees and the state of the drains also has a strong influence on the probability of subsidence. |

2.2 Flood

Q. Will flood assume the same importance as subsidence and what information is available to help rate a particular area?

Types of Flooding

Coastal	Salt water can cause more damage especially if buildings are partly immersed for a number of days. Flooding is often accompanied by storm adding to the potential damage to property. The coast constantly changes so the areas at risk need constant monitoring if information is to remain up to date.
River Flood	Exceptional rainfall causes rivers to swell and burst their banks. Rivers have well defined flood plains which are periodically flooded. Pressure to find new building land has resulted in more of these flood plains being used for housing.
Flash Flooding	This occurs when torrential rain overwhelms normal drainage systems. This is usually much more localised than the other types.

Of these, coastal inundation poses the greatest threat.

- ☐ Possible risk of a catastrophe at least as big as storm (e.g. 1953 flood in East Anglia).
- ☐ Risk confined to specific areas e.g. Humberside, Thames Estuary.
- ☐ Coastal defences cannot protect the whole coast line. It can only protect some areas while letting others go.

Information Available

Comprehensive information on flood is only just beginning to emerge. Some examples of which are :-

BGS Laser scanning technique to provide fine contour information. By flying over an area a 3D map can be created.

The historical flood levels of rivers can be determined by analysing the silt patterns. The biggest flood in the last 100, 1,000, 10,000 years can be calculated. Obviously man made factors such as filling and building on flood plains makes it more difficult to draw predictive conclusions from this information.

NRA Mainly information on the sea defences (position, height, state of repair).

Surveys Halcrows- commissioned by the ABI. A survey to identify coastal areas at risk from flooding and the degree of risk in these areas.

Economic Cost Middlesex University has developed a series of models to estimate the cost of a specific flood scenario. The primary aim was to provide a basis for the benefit assessment of proposed coastal defence projects.

Models

However there are several problems in modelling flood :-

- ☐ One issue of particular importance is the lack of height information. The Ordnance Survey's contour maps use 5m intervals and are too coarse.
- ☐ The exact position of each house is also critical to the modelling process.
- ☐ The path and speed of the flood waters is also vital. This is particularly difficult to model. Both small scale physical models and computer models have proved to be only partially effective.
- ☐ These models attempt to quantify the cost of a flood given a certain set of circumstances but do not analyse the likelihood.

Conclusions

Flood is an inherently difficult peril to model. There are some areas of the data required that are not currently available and there is a lack of claims data with which to test any assumptions made. On the other hand the potential damage that could be caused by a catastrophic event is of the same order of magnitude as for a storm (though experience suggests that the frequency is less).

However a number of advances will be made in the near future :-

- ☐ The Halcrows report will provide an updated picture of the coastal defences and their effectiveness.
- ☐ Postal address will be matched to grid reference to give an exact location for each house.
- ☐ More accurate height information for limited areas.

Therefore it seems likely the flood potential of a particular location will have an increasing influence on household premium rates as more useful information becomes available and the techniques are developed to use it.

3. The Premium Rates

3.1 Rating Parameters

Q : What rating factors are currently used and how is this likely to develop?

Recent Changes

The concept behind which parameters are used in household underwriting has changed over the last few years to include different factors. For instance we now have bedroom related as well as sum insured.

There are also other factors that are being taken into consideration, such as the style of product. Until 5 years ago insurers were only providing 'new for old' or 'indemnity' for contents policies, but now a whole range of different products can be quoted for.

Due to the availability of computer based modelling and statistical solutions the insurer can break down the parameters even further, moving into areas such as postcode or occupation.

Two recent features that have led to closer investigation into rating factors have been recession led theft and subsidence. These have led to an interest in rating security and finer division of postcode.

Security

The rise in theft has led a number of insurers to investigate ways of using the level of security. However the issue is complex and difficult to categorise in a way that is suitable for rating:-

- ☐ High specification window and door locks can help but need to be fitted correctly.
- ☐ Police statements in the press highlight the fact that burglars will return to the scene of a crime. This is due to the fact that the owner has probably replaced the existing items that were stolen.

- ☐ Double glazing can provide additional security but it depends on the type of construction (e.g. type of locks, internal beading). British Standard kite marks and the 5750 award can be used as an indication of quality.
- ☐ The only way of ensuring that these security arrangements are carried out is if the insurer will not provide cover unless the required equipment is installed and used.

Subsidence Risk

The rise in subsidence claims has led insurers to analyse the method of rating building. Two major effects have been :-

- ☐ Differential rates by location with the possibility of separate rates for each full postcode.
- ☐ Renewed interest in age and type of property.

Future Development

There are a large number of discounts or increases that can be applied by breaking down the underwriting factors further (e.g. Locks, Alarms, Neighbourhood Watch, Marital Status). See Appendices 1 & 2 for a more comprehensive list.

Although there is a lot of activity in the area of new rating factors there does not appear to be much consensus on approach. A number of factors contributes to this :-

- ☐ For contents in particular there are two separate rating bases i.e. sum insured and no. of bedrooms.
- ☐ Apart from the major factors such as SI, location and security there is little consistency in the factors used. Each insurer tends to use a small subset of the possible factors outlined above.
- ☐ Many factors only have two levels (e.g. a Neighbourhood Watch discount either applied at, say, 10% or not given). It seems likely that once a better understanding has been developed factors will have more levels.
- ☐ The interactions between the newer factors have not been investigated (e.g. what effect does level of security have on a Neighbourhood Watch Area discount).

Conclusion

One of the main challenges will be to fully understand the effect of the more recently introduced rating factors. Some of these clearly have an influence on the profitability of policies whereas others may just be "marketing discounts". Two areas which could provide some additional help in identifying profitable business are :-

Lifestyle attributes There are several systems which classify areas based on census data. Their rating potential is assessed in the next section.

Creditworthiness There appears to be a connection between creditworthiness and claim experience. Banks, building societies and direct writers are currently best placed to use this feature.

3.2 Lifestyle Rating Factors

Q : To what extent can lifestyle information be used to identify profitable and unprofitable business?

Current Classifications Available

The fundamental data source is census data, and all are now based on the 1991 census. Those systems which developed during the 1970/80s have been revised in the light of experience, and most are substantially different in terms of the numbers of input variables and output groups. Some of the systems also incorporate non census data, such as electoral roll details, credit data, and so on. The main systems to date are :-

- ACORN
- PiN
- FiNPiN
- MOSAIC
- Superprofiles
- DEFINE
- Images
- Neighbours and Prospects

The primary objective is to identify clusters of broadly similar customers (or sales territories or potential clients, etc.) and classify them as neighbourhood groups who could be dealt with in similar ways. The potential implication for insurance, especially household insurance, is that similar neighbourhoods may be appropriate clusters to attract the same rating.

Most of the classifications have a maximum discrimination of about 50 clusters, although Superprofiles has 160, and DEFINE has 1050 (though the latter represents 50 types of neighbourhood multiplied by a 21 scale financial 'change indicator'). DEFINE actually uses insurance rating as one of its input variables.

Possible Applications in Premium Rating

Targeting systems aim to identify types of people or types of neighbourhood. These can be integrated with insurance data using geographical information systems. Potential customers can supply a geographical key such as postcode. It seems intuitively reasonable therefore that insurers could use targeting systems to aim rates

more accurately. The broad methodology is to establish a rate (or loading) appropriate for each cluster, find the cluster appropriate to particular addresses, and offer the customer the rate for his or her cluster.

Future Development

Before these systems can be fully used there are some important aspects that need consideration :-

- ☐ In order to assess the ability of these lifestyle attributes to predict future claims the volume of past experience needed is likely to be large (perhaps beyond the scope of any one insurer).
- ☐ It may encourage insurers to load rates for unmeasurable subjective factors (i.e. council housing bad, professional classes good).
- ☐ To give a postcode sector a cluster rating to cover 2000 households is unhelpful. How many people would regard even the 15 or so households in their own individual postcode as reasonably similar risks to themselves?
- ☐ Rating by individual postcode may only be practicable for direct writers and brokers with networking and EDI facilities.
- ☐ It may only be useful for crude 'redlining'. The industry still maintains a curious form of pseudo-lifestyle redlining in that it discriminates against various occupations. There must be a suspicion that such occupations suffer more from prejudice than from statistical evidence. Undesirable though it may be, it is at least feasible that such prejudice could be extended to lifestyle.
- ☐ It might leave insurers open to charges of illegal discrimination (e.g. racial discrimination). Clearly rating is a process of discrimination. Various sorts of discrimination are illegal, and the industry must ensure that the methods it adopts to discriminate are not direct proxies for illegal acts.

Conclusions

The background of lifestyle classification is marketing. It has been especially useful in increasing response rates on mailshots, for instance- but only to rates of about 2% to 5%. (i.e. they 'get it wrong' in 95% of cases). When underwriting insurance, the industry needs to redress this balance in order to maintain credibility. If lifestyle classification is to be used to load or discount insurance premiums we need to 'get it

right' much more frequently to avoid the criticism of unfairness. There appears to be a significant number of obstacles to overcome before we could safely recommend special rates for "Yuppies" or "Dinkies".

However there are some possible areas where these systems of classification could help :-

- ☐ Providing a guide to the suitable rate for an area where the insurer has no claims experience of its own.
- ☐ Providing some measure of the claims consciousness of a particular type of policyholder.
- ☐ Gaining an insight into the possibility of fraudulent claims.

3.3 Constructing Rates by Peril

Q : Are sum insured or number of bedrooms adequate measures of exposure for household risk ?

Construction of Household Premium Rates

The typical buildings policy may provide cover for upwards of 20 specified perils. Those of fire, theft, storm, flood, burst pipes and subsidence accounting for most of the claims cost.

The claims experience (frequency and/or severity) for each peril will vary by rating factor (as described in the previous sections) :-

- geographical area
- type of building
- occupancy details
- security measures

There are additional factors internal to the insurer/policyholder relationship which will differentially affect the various costs of providing cover for each peril :-

- product design (excesses, limits and exclusions)
- underwriting
- claims control
- reinsurance considerations

The parameters (frequency, claim size distribution and settlement patterns) describing the claims arising from each peril will "react" differently when there are changes in the factors external to the insurer/policyholder relationship :-

- economic
- environmental
- social (behavioural)
- legal

Comparison of Perils

As a measure of exposure SI and no. of bedrooms have similar approaches. SI method assumes that the exposure to every peril is proportional to the estimated rebuild cost (or replacement of contents) after a total loss whereas the bedroom rated method assumes that exposure is proportional to the size of a house or cost of contents (for which the number of bedrooms or rooms is a proxy).

It is not difficult to find examples where these assumptions appear suspect. It would seem unlikely that the contents theft risk premium increases in a linear fashion with SI. Subsidence costs, on the other hand, have a stronger relationship with the total rebuild cost for a property

The fictitious example in Appendix 3 give an indication of the cross subsidy that could arise if not all perils are linear.

Current Market Practice

The traditional pricing of buildings insurance using sum-insured or numbers of bedrooms as the exposure measure cannot hope to encapsulate the interactions of all the factors listed above. Management indicators based on such exposure measures will serve to confuse rather than explain.

The traditional methods have little theoretical merit. What merit they do have can be summarised in one word, simplicity. Simple systems can work in insurance, as is witnessed by the longevity of the sum insured as the exposure measure, but there are a limited set of circumstances under which they can be sustained.

Paramount is stability, and this is both in the behaviour of the underlying risk and the behaviour of the market (seller and buyer). Even where a crude measure of exposure is used, the rating structure itself can be adjusted over time to reflect long term changes in climatic, social, legal and other trends which may affect the experience of the underlying perils. As long as these changes do not fundamentally alter the nature of the cover provided then many of the deficiencies of the exposure measure can be compensated for by changes in the rating structure.

If both sellers and buyers are prepared to accept the anomalies within the system and, in particular, if no seller breaks rank then over the long term the market may achieve its pricing objectives. If, however, either the fundamental balance of the risks insured changes or individual players in the market seek to exploit the deficiencies within the system then simple systems will be undermined.

Conclusions and Points for Discussion

The recent experience of storm and subsidence claims, the increasing moves to more selective pricing and new players entering the market place, surely means that the days are numbered for the simple approach. However there are some aspects of the household market which make change more difficult :-

- ☐ Banks and building societies that write block policies like the current simple method of processing business.
- ☐ Brokers do not want a more complicated method of calculation for what is small premium business.
- ☐ Although few would defend SI as the best theoretical system there is little consensus on what should replace it.

3.4 Redlining

Q. : How should actuaries respond to the issue of redlining?

Introduction

In this section we attempt to highlight the major issues that require discussion rather than to propose a definitive position statement that would be appropriate to the profession. However, we hope that the discussion at Glasgow will help to stimulate proactive action by the profession to help ensure an orderly and acceptable development of the marketplace. The issues that we highlight are :-

- What is redlining?
- What causes insurers to redline?
- Is redlining socially acceptable?
- How to bridge the gap?
- What is the role for actuaries?

What is Redlining?

For the purposes of this paper we define redlining to occur when an insurer declines to provide cover at a reasonable cost to a group of risks as a result of the characteristics of the group.

Examples for household insurance include properties perceived to be at significant risk of subsidence or theft of contents by virtue of their geographic location. Examples for motor include hot hatches that are perceived to have an unacceptable risk of theft and young drivers who are perceived to have an unacceptable risk of accident.

It should be noted in any discussion of redlining that the term is often used politically to suggest the refusal of cover at reasonable cost to ethnic minorities in certain geographic regions. In this paper we highlight purely economic arguments but refer to the inevitable racist charges that the profession may face as a result of the application of basic actuarial principles.

The definition has been applied to the actions of individual insurers. The issue of redlining will become politically sensitive when the actions of the market as a whole either force premiums to an unacceptable level or restrict the cover available to a significant group of risks. Consequently, pressure may be brought to bear on the industry to find new mechanisms of risk financing, or have politically engineered solutions imposed.

What Causes Insurers to Redline?

The insurance service. The service that insurance organisations provide to society is to enable individuals to swap a large uncertain liability for a small but certain one - an insurance premium. Insurers are required by their capital providers to provide sufficient return on the capital they require to support this service. Consequently, the insurance premium charged must reflect the cost of risk transferred. With advances in information technology insurers are under increasing pressure to ensure the appropriateness of premiums charged for each individual risk.

This can cause redlining to occur for the following reasons:

- Premiums are perceived as unreasonably high.
- The cost of risk is highly uncertain.
- Exposure of the capital base to catastrophic loss
- Abuse of the insurance service
- Companies target market segments

Premiums are perceived as unreasonably high. In an economic sense, the premium required would appear unreasonable as it began to approach, say, the value of the sum insured. This applies to coastal subsidence protection for the property on a coastline that is constantly being eroded.

Cost of risk is highly uncertain. The uncertainty of the cost of certain groups of risks make exposure to such risks commercially unjustifiable. This may be a result of the potential downside or the investment required to obtain the necessary information and expertise to cost and manage such risks effectively. An example is buildings cover for risks in geographic regions believed to be prone to subsidence damage.

Exposure of capital base to catastrophic loss. Groups or risks that are all exposed to damage from a single event, for example coastal inundation, may be redlined due to the resulting catastrophe exposure that an insurer would otherwise assume. An insurer that either cannot obtain the reinsurance it needs to transfer such exposure or is unable to quantify it reliably could jeopardise its solvency.

Abuse of the insurance service. Certain members of the population only purchase insurance if they believe they will profit from the policy relative to other apparently similar risks. An example would be a contents policyholder who purchases cover with the intention of making false theft claims. Clearly, there can be no appropriate premium for such a policyholder.

Companies target market segments. This is redlining by default, for example an insurer that targets rural policyholders only. The company would aim to achieve

competitive advantage through more effective marketing and distribution, higher customer satisfaction and potentially lower than average claims experience through the effects of class selection. Clearly, whilst such selection benefits those chosen, urban policyholders are redlined by the company.

Is Redlining Socially Acceptable?

The principle factors that will determine whether redlining is socially acceptable are:-

- Are significant groups affected?
- Is the redlining policy reasonable?
- Are acceptable alternatives available?

Are significant groups affected? Redlining will only become politically sensitive when the actions of all insurers in the market either force premiums to an unreasonable level or restrict the cover available to a significant group of risks.

Few, if any groups of household risks are likely to trigger political involvement in the immediate future, however, it is likely that there will be an increase in the consistency of redlining policies between insurers, as more information can be analysed to assist estimation of the cost of risk.

The household insureds that are currently most likely to be redlined by a large proportion of the industry are inner city contents policyholders, due to the theft experience, and buildings policyholders for properties perceived to be at high risk to subsidence.

Is the redlining policy reasonable? Insurers should be able to demonstrate that the policy they follow is reasonable. The most convincing way to do this is to provide supporting statistical evidence.

For certain risks, a company should be able to demonstrate that the cost is too high fairly easily, for example coastal erosion. By contrast, the company may have insufficient data to demonstrate this for subsidence. However, in this case the uncertainty of the cost of risk could be sufficient evidence.

The analysis would have to be demonstrably objective. For certain cases, such as redlining urban contents policies due to the theft risk, this will enable the industry to provide a suitable riposte to charges of racism. Similar considerations apply to policyholders refused cover as a result of information obtained from use of the CLUE database.

Whilst the preceding points discuss the reasonableness of a redlining policy from an individual insurer's perspective, in the event that redlining becomes significant on a market wide scale, the industry may be required to demonstrate the policy's reasonableness on this scale. For example, whilst individual companies may have insufficient data and expertise to price and manage certain risks, such as subsidence or coastal inundation, it may be possible to establish an industry-wide pool that could provide cover to individual insurers.

Are acceptable alternatives available? If significant groups are affected by market-wide redlining policies the insurance industry is likely to have politically engineered solutions imposed upon it, regardless of the reasonableness of the redlining policy, unless it proposes socially acceptable alternatives. We discuss some of the possible alternatives in the next section.

How to Bridge the Gap?

We first discuss risks for which the insurance industry could provide acceptable cover in the face of widespread redlining and then discuss alternative arrangements that could be useful for other risks.

Some gaps are acceptable. Some risks are already accepted as being uninsurable such as coastal subsidence and riverine flood. For coastal subsidence, only King Canute would attempt to modify the risk and risk financing is inappropriate. For riverine flood, property owners in very high risk areas are required to retain the flood risk themselves and can modify the risk substantially by acquisition of sand bags and ensuring property is easily portable. Therefore, insurers may continue to write insurance but to redline some specific perils.

Specialist insurers. The subsidence peril is currently the greatest stimulus towards redlining in the buildings market. However, the peril itself can be subjected to more accurate cost estimation than is currently being applied by most insurers. The profits that could be available to service a niche market of properties redlined by unsophisticated methods would stimulate some insurers to develop the required expertise to cost and manage the risk more effectively.

Alternative methods of risk financing. If insurance is not voluntarily available but society deems that some form of risk financing is necessary then possible options are:

- residual market mechanisms
- self insured pools
- nationalisation

Residual market mechanism. A residual market mechanism would prescribe a reallocation to insurers of risks that were redlined by the primary market. The premium rate for such a risk would probably be set at a standard rate. In such a situation, the insureds of the primary portfolio are required to subsidise the premium rate inadequacy of those that were initially redlined. There have been suggestions that for some perils, such as theft in urban areas, the application of such compulsory insurance could serve to worsen claims experience rather than deal with the underlying problem.

Self insured pools. Alternatively self insured pools could be established that would give the insureds an interest in the control of the risk. In this instance, the actual cost of risk is borne by the individual risks although a spreading mechanism operates. A self insured pool could operate between different risk areas and indeed this is the principle behind effective reinsurance. By retaining an interest in the cost of the risk, rather than requiring subsidies from other groups, more efficient risk financing can be achieved. However, some element of cross-funding may be necessary to ensure that the cost of risk retained is socially acceptable. For coastal inundation, some form of social funding may be desirable given the economic dependency between inland and coastal.

Nationalisation. In the event that none of the above methods provide socially acceptable cover the government itself could provide cover. The financing could be raised by taxation and the operation run according to the primarily political objectives.

Conclusion

The cost of risk is the core driver behind risk financing. Actuaries are specifically trained to assess not only the expected cost of risk, but also its associated uncertainty. Therefore, actuaries have a fundamental role to play in ensuring that objective steps be taken to ensure that an appropriate evolution of the marketplace occurs if redlining policies become more widespread. In particular actuaries can:

- ☐ Help insurers investigate the reasonableness of redlining practice.
- ☐ As a profession, identify the types of risk that are becoming subject to increasingly concerted redline policies by individual companies, and that could subsequently be redlined by the industry as a whole.
- ☐ Help to identify and evaluate the cross subsidies that would be involved with the alternative methods of risk financing.
- ☐ Contribute to help ensure that the alternative risk financing vehicles selected are soundly financially based.

4. The Market

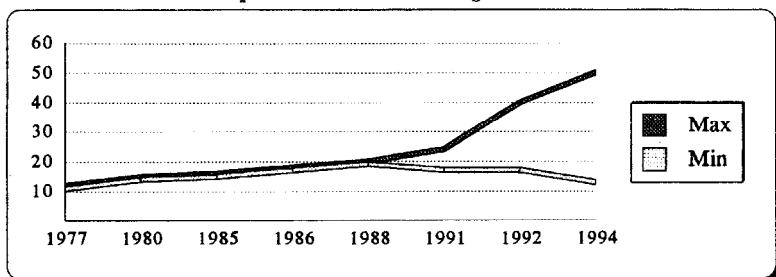
4.1 Price Variation

Q : Is there any consensus in the market on the differential rating for areas of high subsidence and flood risk?

Divergence of Household Rates

Until the late 1980s there were uniform buildings rates for the whole country the only rating factor being the total rebuild cost (i.e. the sum insured). The high levels of subsidence in 1989-1991 forced the insurers to use location as a rating factor. As their ability to distinguish high and low risk areas increased the range of rates widened. An example of a typical insurer's rate is shown in the graph below.

Graph 2 Historical Buildings Rates



The divergence of contents rates followed a similar pattern though it happened much earlier. Initially there was a two tier system where only metropolitan areas attracted a higher rate but the market gradually moved to the wide range we have today.

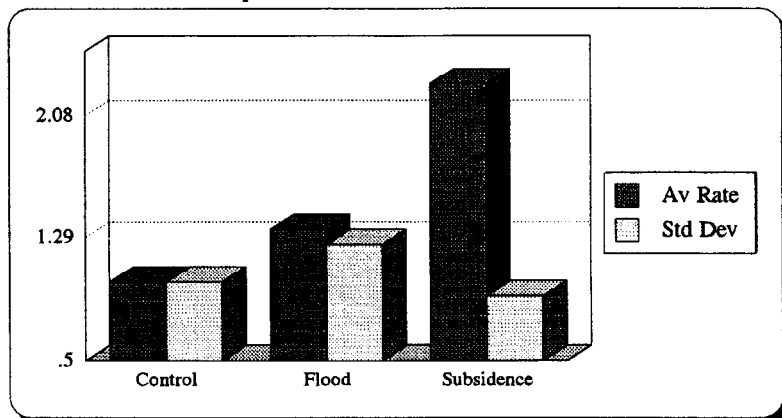
Variation in Rates for High Flood & Subsidence Areas

In order to investigate the price variation 3 sets of postcodes were identified :-

- Areas prone to subsidence.
- Areas prone to flood (or high risk of coastal inundation).
- Control postcodes with no exceptional risk.

A basket of typical postcodes were then selected for each type and the rates of seven major insurers compared (see Appendix 4). The average rate charged and the standard deviations of the flood and subsidence groups were then indexed against the control group. The results are shown below :-

Graph 3 Relative Rates and Variation



From the analysis we can see that :-

- ☐ High flood risk areas attract a much lower premium than high subsidence risk areas (30% above the control compared with subsidence areas which are 130% higher).
- ☐ The variability of the rates in the subsidence group is lower than even the control group.
- ☐ There is far less consensus about the appropriate rate in the flood group with some rates being comparable to those found in the control group.

In the subsidence group around 30% of the sample was a referral as opposed to a rate. Consideration on referral often involves an additional questionnaire to be filled in.

The apparent agreement on the premium rates in the subsidence group is a recent phenomenon. If this analysis had been done a few years ago the picture would have been similar to the situation found in the flood group now. There are a number of possible reasons for this :-

Geological Data	A large amount of geological data is now available whereas there is still a scarcity of usable information on flood. In particular it is difficult to get accurate information on height above sea level.
Claims Experience	There is a large amount of subsidence claims experience with which to test models but there is much less claims experience for flood. Therefore the subsidence models based on geological data can be tested more rigorously before implementation.
Complexity	The flood models are dependent on a large number of factors and are therefore more complex than the current subsidence models.

Conclusion

The main findings of the analysis are :-

- ☐ There is greater consensus on the rates for areas prone to subsidence than flood.
- ☐ The situation in areas prone to flood is similar to that experienced by the subsidence areas 2 or 3 years ago.

Therefore, if the rates for flood prone areas follow the pattern of subsidence prone areas, in the future there will be greater consensus on which areas are affected and the rates in these areas will increase.

4.2 Analysis of Channel

Q : What are the topical issues for block business?

Increasing Consumer Awareness

- ☐ This is coming from a number of sources, including press articles and press, radio and TV advertising. It obviously has a greater effect close to the renewal date.
- ☐ There is concern that the household market is following the motor market (to some extent) by becoming more of a commodity purchase. However, the "best" policy does not necessarily mean the cheapest premium.

It is difficult to assess how much of an issue this represents. The publicity over endowment mortgages has not stopped people taking them out.

Threats to Block Policies

Direct Writers	Traditional insurers writing block policies need to reduce costs and to pass on the benefits to customers. Traditional insurers are responding by setting up their own direct writers.
Home Service Companies	By using direct sales forces which are often known to customers, home service companies are able to attack block policies, with some paying the administration fees required by lenders if alternative insurance arrangements are made.
Redlining	Redlining does not sit comfortably with block policies as lenders want to insure as many houses as possible because of related (and more important) mortgage business. Block policies therefore require an element of cross subsidy in rating but other companies are able to avoid cross subsidy.

Product Design and Rating

At first sight No Claims Discount has a certain attractiveness but in reality most customers are likely to have the maximum discount. However dealing with new customers becomes a major issue for block policies as the basic rate is therefore high, resulting in problems with publicity. Other discounts typically available include age of policyholder, age of property and security.

As credit and, more recently, behavioural scoring is used more frequently by banks and building societies for mortgage purposes, it may become possible to use the results for building insurance rating.

- ☐ The increasingly sophisticated point of sale systems used in branches capture data for mortgage purposes which could be used in calculation of premium rates.
- ☐ There is some evidence that poor credit risks are also poorer insurance risks.

The future for block policies

In the face of increasing competition, banks and building societies are examining their role in the insurance market and how to build on their strengths :-

Manufacture

- ☐ As yet only one bank writes their own general insurance risks.
- ☐ General insurance is seen as too risky (unlike banking or mortgage lending!)
- ☐ Building societies are currently limited to a 15% stake in a general insurance company (except for MIG). However, the latest Treasury proposals remove this limit so that a building society would be able to set up a personal lines general insurance company.
- ☐ One major building society has already expressed interest in such a venture.

Intermediaries

- ☐ Increased consumer awareness and direct writers may force banks and building societies down the intermediary route, especially for "non-standard" cases e.g. large properties, thatch etc.

Stability

- ☐ Geographical rating was seen as a way of upsetting market stability in favour of the insurance companies and as a way of hiding overall increases in premium rates.
- ☐ There is some evidence that lapse rates are increased if premium rates change at renewal (even on reduction in premiums!)

Knowledge of Customers

- ☐ As mortgage lenders will collect detailed customer information during a mortgage interview, use credit and behavioural scoring techniques, surveys etc., they should have a better knowledge of the risk which could be used to their advantage in setting premium rates.

Structure of Household Cover

Appendix 1

1. Insurance Type

Insurance type relates to the type of risk being covered :-

- Buildings
- Contents
- All Risks
- Personal Liability

Combined policies can be quoted for but you will also have the all risks section broken down again to :-

- Specified
- Unspecified
- Money
- Caravans
- Freezer Contents
- Personal Accident

2. Cover

Cover relates to the individual types for each section of insurance type. For Buildings there are only two major types :-

- Replacement
- Repair

In Contents this is taken further :-

- Indemnity
- New-For-Old
- New-For-Old/Accidental Damage

Contents does include items of All Risks, Specified or Unspecified, but separate policies are available for this. Under Buildings and Contents there is also an element of Public Liability.

3. Property Type

Property type includes the style and also the type of construction. These may be:

House	Detached	Flat	Purpose Built
	Semi-Detached		Self Contained
	Terraced		Non Self Contained
	Bungalow (broken down as above)		
	Mobile Home		

Construction of either property type, will be standard or non-standard. The number of bedrooms, size and sum insured must be considered.

4. Area

Factors to be considered in area will be:

- Area of Country - postcode
- Whether area is subject to Subsidence/Landslide/Flooding

5. Ownership

- Owner Occupied
- Rented Furnished } take into consideration the number occupying.
- Rented Unfurnished }
- Second Property
- Occupation - Whether left unattended for periods of time

6. All Risks

The components are what items are covered in the different sections of all risks:

Specified	TV/Hi-Fi	Unspecified	Money
	Jewellery		Sports Equipment
	Clothing		Clothing
	Photographic Equipment		Stamps
	Pedal Cycles		Other Collections

1. Risk Management

- Locks/Alarms
- Smoke Detectors
- Fire Appliances
- Neighbourhood Watch

2. Details About the House

- Number of Windows
- Type of Windows
- Number of Exits

3. Lifestyle

- Gender
- Age of Occupier
- Religion/Nationality
- Marital Status
- Dog Ownership
- Employed/Unemployed/Retired

4. Product Details

- Loyalty Bonus
- Excesses
- No Claims Discounts
- Combined Policies
- Claims History (not just this property)

Buildings Rates Example

If it is assumed that :-

- Expenses are fixed per policy,
- Theft cost is per policy
- Storm has a fixed and proportional element
- Subsidence is proportional to SI
- There is no commission

the following theoretical premiums and average rates per district can be constructed.

(The rates in this example are purely intended as an illustration of the possible difference between theoretical rates and average rates per SI.)

Dist	SI	Fixed Expenses	Theft	Storm Variable	Fixed	Subs	Prem	Rate	Average Rates
1	50	20	5	5	20	25	75	1.50	1.07
1	100	20	5	10	20	50	105	1.05	1.07
1	150	20	5	15	20	75	135	0.90	1.07
1	200	20	5	20	20	100	165	0.83	1.07
2	50	20	6	5	15	50	96	1.92	1.53
2	100	20	6	10	15	100	151	1.51	1.53
2	150	20	6	15	15	150	206	1.37	1.53
2	200	20	6	20	15	200	261	1.31	1.53
3	50	20	7	5	10	75	117	2.34	1.99
3	100	20	7	10	10	150	197	1.97	1.99
3	150	20	7	15	10	225	277	1.85	1.99
3	200	20	7	20	10	300	357	1.79	1.99
4	50	20	8	5	5	150	188	3.76	3.44
4	100	20	8	10	5	300	343	3.43	3.44
4	150	20	8	15	5	450	498	3.32	3.44
4	200	20	8	20	5	600	653	3.27	3.44

Buildings Rate Survey**Appendix 4**

	Company						
	1	2	3	4	5	6	7
Subsidence Districts							
District 1	50p	32p	Refer	40p	41.5p	Refer	40p
District 2	50p	32p	38p	28p	41.5p	37p	24p
District 3	50p	32p	Refer	40p	41.5p	Refer	40p
District 4	50p	40p	Refer	40p	41.5p	Refer	40p
District 5	50p	40p	Refer	40p	Refer	Refer	40p
District 6	50p	40p	Refer	40p	41.5p	Refer	40p
Flood Districts							
District 1	24p	22p	25p	22p	21.5p	21p	14p
District 2	30p	26p	29p	22p	24.5p	28p	20p
District 3	24p	22p	25p	22p	21.5p	21p	14p
District 4	30p	26p	29p	25p	28.5p	21p	17p
District 5	30p	22p	29p	22p	24.5p	37p	15p
District 6	30p	32p	25p	22p	24.5p	32p	17p
Control Districts							
District 1	15p	18p	21p	18p	17.5p	17p	14p
District 2	15p	18p	21p	18p	17.5p	17p	14p
District 3	15p	18p	21p	18p	17.5p	17p	14p
District 4	15p	22p	25p	22p	21.5p	21p	15p
District 5	15p	22p	25p	18p	21.5p	21p	14p
District 6	15p	18p	21p	18p	17.5p	17p	14p