

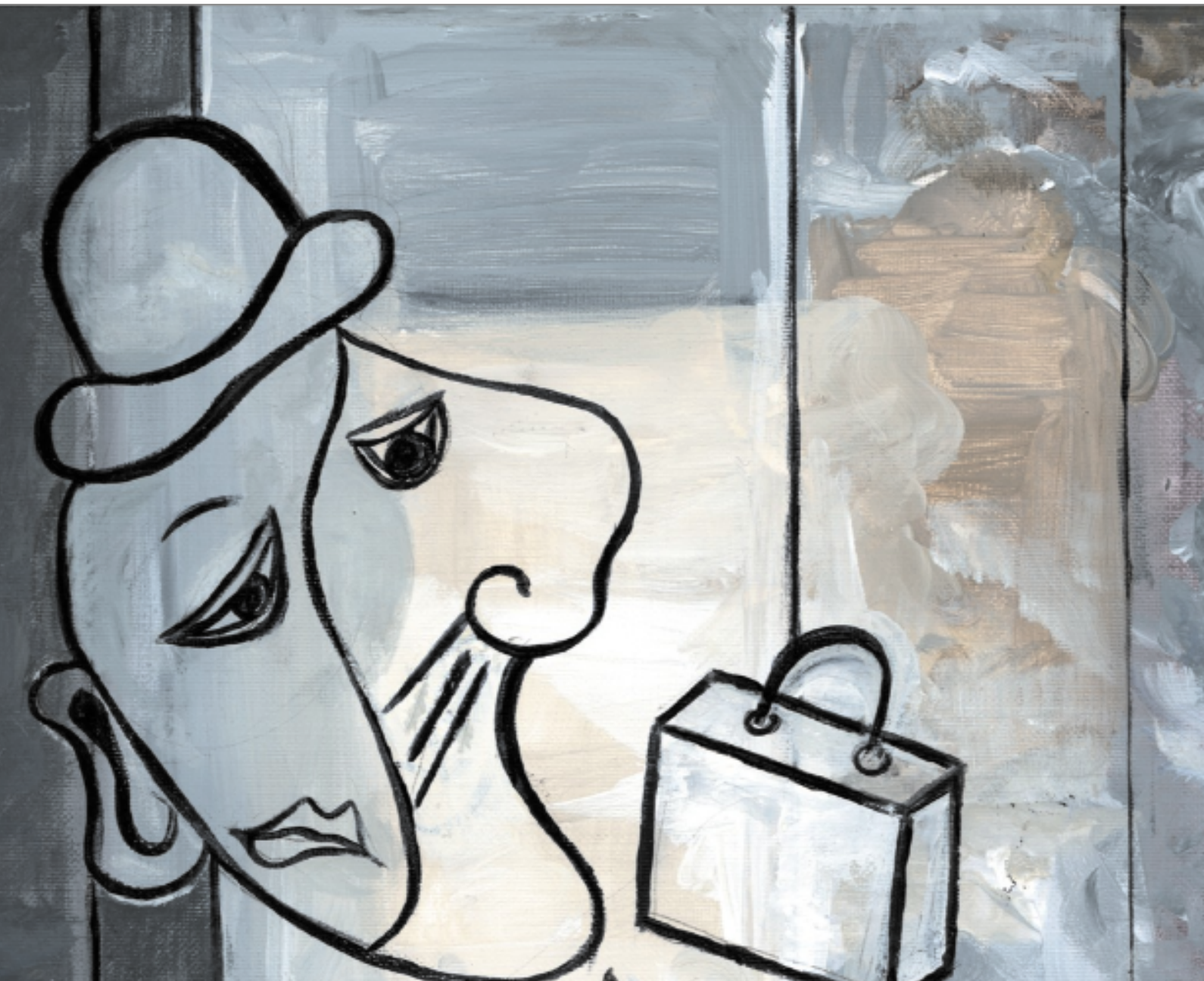
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Art for Art's Sake

Derek Newton

"If it sells, it's art" - Frank Lloyd - Actor, Director, Writer

Frank Lloyd might have known a thing or two about making movies but he probably knew nothing about transferring risk. Or did he? With the above statement did he in fact hit the nail on the head? What is ART? What lies behind the initials? Is ART merely the latest sexy concept in the insurance firmament? Or does it represent fundamental change in risk management? In this article we attempt to answer these and many more questions about ART.

What is ART?

ART stands for Alternative Risk Transfer. Beyond that there is considerable uncertainty regarding the definition of ART; people use the term "ART" a little like Humpty Dumpty in Alice in Wonderland, to mean whatever they want it to mean.

The simplest definition of ART is any risk transfer mechanism that is not purely traditional insurance or reinsurance. Within this description one could include:

Finite insurance/reinsurance. Typically these are multi-year and/or multi-line contracts. These contracts appeal to purchasers because they tend to provide cover at a lower price than the equivalent mono-line/single year contracts (as there is diversification over more years and/or uncorrelated product lines) and also allow smoothing of results. They also offer purchasers greater flexibility in managing their risks.

Transfers of insurance risk to the banking and capital markets. These markets will take on risks that they consider are uncorrelated with those that they routinely accept, and therefore provide an additional source of capacity.

Quasi-transfers of insurance risk. Under this category come:

- **contingent funding arrangements**, whereby an organisation can obtain funding, on pre-agreed terms, if and when a particular event occurs. The attractions to the buyer are that only a commitment fee need be paid before the event, and that the pre-agreed terms are almost certainly more favourable than those that would be available post the event.
- **insurance derivatives**: such as catastrophe and weather options.
- **swaps**, whereby organisations with matching but uncorrelated risks can simply swap parcels of them, thus providing each with

greater risk diversification. For instance, a reinsurer with Japanese earthquake exposure might swap some of that with another reinsurer that has exposure to Florida hurricanes.

Swaps can be also arranged between non-insurance operations. For example, energy companies dislike warm winter weather as it results in consumers using less of their product; on the other hand household insurers dislike cold winter weather as it leads to frozen pipes and insurance claims. Such organisations can swap their risks, although, unlike the reinsurers above, which can perform their swaps directly, the energy company and insurer would have to conduct their deal via a transformer insurer.

Transfers of risks that the traditional market would regard as uninsurable, e.g. systemic risks, such as some operational risks.

Some people include self-insurance, or the use of captives, within their definition of ART, as such risk management techniques are not traditional insurance. Some also include more traditional-sounding covers, such as adverse loss development covers, if the covers are complex and their placement involves considerable amounts of modelling.

The growth of ART

Demand for ART solutions tends to be fuelled by the scarcity of conventional cover or through spiralling prices. An example of this occurred in 1992 when, with the insurance market depressed and the reinsurance market severely under-pricing catastrophe risks, Hurricane Andrew blew in as the biggest single insurance event in history. Premiums promptly rocketed and market capacity for catastrophe risk was very much reduced.

Organisations with exposures to such perils had to seek cover in new markets, even in non-insurance solutions. This sparked the development of catastrophe bonds and of catastrophe derivatives (the Chicago Board of Trade started trading catastrophe options in 1995, other exchanges following in later years).

The supply of ART products has also been growing. Those outside the insurance market see ART as a means of diversification. Meanwhile, traditional providers have viewed ART as protection for their bottom line against the ravages of a soft market. By developing more imaginative solutions to meet the risk transfer needs of its clients, they hoped also to develop and more lucrative ones.

So the ART market grew slowly but steadily. That was meant to change following September 11. In the aftermath of the terror-

ist attacks it was widely expected that both insurance and reinsurance rates would soar, at the same time as market capacity was slashed, with the cost of claims eating into many (re)insurers' capital, and several going out of business. On top of that, with the unthinkable having just happened, the demand for insurance was expected to shoot upwards. So there would be a surfeit of demand over capacity, and, with few other options, the excess would go to the ART market. The ART market would also pick up business that the traditional markets had overpriced. Hence there would be a step change in the growth of ART business.

That was the theory it just wasn't the practice. Sure, premium rates rose. But those increases, and the fat profit margins that then lay within the premiums, attracted new capital. Millions were injected into the major underwriting centres. Far from being slashed, overall market capacity levels held pretty much as they were before September 11 (although underwriters lost any enthusiasm that they might have had for particular lines, such as terrorism cover).

Insurers themselves have appeared less keen to promote ART solutions. As noted earlier, ART provided an opportunity to make good profits at a time when conventional business was being sold on thin margins. Part of these profits was justified by the work involved in bringing about a deal and the risks inherent within the complex structures. With conventional business now generating good margins many insurers appear to be throwing their resources entirely behind this easier to write and less risky business, leaving the ART market to its own devices.

So the need and the supply are not nearly as great as had been expected. And the demand is also much less than forecast, mostly due to the "Enron effect". Although Enron was not the only recent company failure that highlighted the perils of balance sheet manipulation, involving various ART-style transactions, it was certainly the most high profile. The upshot of this has been a marked aversion amongst chief financial officers to become embroiled in anything that is not immediately transparent. Whilst most ART solutions involve genuine risk transfer, and are not designed to distort the accounts, many do have complex structures that are not immediately obvious. It is now hard to sell any but the simplest and clearest ART structure.

Regulation

One predictable consequence of Enron and the other recent failures has been the call for the regulators to clamp down on ART deals. This puts the regulators in a difficult position. By and large they welcome ART solutions as they increase market capacity and protection, which is good for both consumers and market confidence.

On the other hand, the regulators are also aware that the complexity of some ART arrangements poses danger for unsophisticated purchasers. Moreover, the lack of transparency in some ART contracts can frustrate the intentions of regulators, by causing the purchasers' solvency positions to be mis-stated, their profitability to be distorted, and the information therefore available to consumers to be misleading.

Regulation of the ART market is tricky. For one thing, it is hard to regulate something that cannot easily be defined (see above). For another, ART currently crosses over between regulatory environments (banking, insurance, etc.). In Europe and in other parts of the world, there is gradual convergence of the various regulatory regimes under a financial services umbrella. That will take away this issue (as well as the opportunity for regulatory arbitrage between the industries and countries), but it will take time for that to be completed.

Last year, the Financial Services Authority published a Consultation Paper that outlined how it would like to regulate ART-style products in the UK. It neatly side-stepped the issue of definitions by re-emphasising its existing principles and by declaring that no additional rules should be necessary to cater specifically for ART business. However, it made it clear that it is the responsibility of directors to understand fully any ART contracts that their organisation buys, in particular the extent and security of risk transfer involved, and that the accounting for such contracts should allow realistically for the risk being transferred. Thus, the accounting for deals that are purely cosmetic should not allow for any risk transfer, rendering such deals redundant.

So what is the future for the ART market?

“People who make art their business are mostly imposters” ~ Pablo Picasso

We have still not seen the big surge in ART activity that has been widely predicted for some years. We have also not yet seen many truly hybrid solutions most still remain definitely insurance solutions or capital markets solutions. So is ART a damp squib that will fizzle out like most short-lived fads.

I believe that the answer is “no”. Despite all of the issues noted above there continues to be activity regarding finite deals, non-catastrophe securitisation deals, contingent funding, weather derivatives, catastrophe swaps, etc. The global need for risk transfer mechanisms, within the discipline of risk management, is still growing and looks likely to outstrip greatly the capacity of the traditional insurance and reinsurance markets. The excess demand will have to find other outlets.

Moreover, some of the emerging issues that are feeding the growth in demand pension funding, longevity, the availability of professional indemnity cover, cover for flood-prone buildings, etc. appear to lend themselves to ART solutions.

How quickly will the ART market grow? To some extent that will depend on the same external factors that have influenced development to date. But it is also in the hands of the practitioners. In particular it is important that they develop simpler, more transparent structures, within which it will be easy to demonstrate the delivery of real benefit to the purchaser. It is also important that the market avoids being implicated in more financial scandals. ART needs ARTists, not “imposters”.

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Marine Liability Pricing

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Marine Liability underwriters notably those at the Protection and Indemnity (P&I) Clubs have traditionally used essentially empirical approaches based on individual risk experiences to arrive at their pricing. But P&I is a direct class of insurance and the underwriters have at their disposal significant data volumes. This means that it is more than possible to apply the kind of modelling techniques to P&I (and, for that matter, to other classes in the marine sector) that have become more commonplace elsewhere in the General Insurance world. In this article, we note the traditional methods, the data available and suggest a way forward.

P&I as a class of insurance dates back well into the 19th Century. The methods used by its underwriters have evolved over the decades and, to a certain extent, are tried and tested. Although this is a direct class of insurance, the risks tend to be individually underwritten as part of a fleet assessment. At renewal time, the actual experience of the fleet of vessels will be the principal factor taken into account by the underwriter.

Larger fleets may be broken down into roughly homogeneous groups of vessels (crude oil tankers, for example, may be assessed together), but it is unusual for the assessment to be any more detailed than that. The simplest underwriting models may do little more than calculate the historic gross loss ratios by underwriting year, with no adjustment for unexpired risk, IBNR or unallocated expenses. These simple calculations will be used to judge whether or not the rating group is profitable or not and from that judgement, a variation is derived from the overall (or "general") increase that the Club's Board has agreed needs to be applied to the totality of premium income for the coming year.

There are more sophisticated models in the market as P&I Clubs in the International Group pool their losses above \$5 million and collectively purchase Excess of Loss reinsurance above \$30 million, one obvious variation on the basic loss ratio model is to cap claims at the \$5 million retention point and apply an overall loading to account for the Club's share of Pool and reinsurance claims (for several years, the Clubs have participated in their own reinsurance programme by taking a vertical slice of the working layer on a co-reinsurance basis). A variation on this theme is to recognise that \$5 million is far too high a point to share large claims without seriously distorting the loss ratio model for those fleets with a large claim.

It is becoming accepted wisdom that \$100,000 is a far better point and accordingly, some underwriting models now create an "abatment layer" between \$100,000 and the retention, with the cost of abated claims being distributed evenly across the entire book.

Other models do exist with adjustments for IBNR, IBNER, expenses and so on. Some attempt to relate premium to the risk by developing a simple burning cost model, based on losses per entered ton.

But the common factor of all of these models is that they are essentially one-dimensional, or at best two-dimensional and make no real statistical use of the wealth of data held on the underwriting systems.

Rating Factors

As previously noted, most existing pricing models analyse actual experience by underwriting year and maybe according to some rough vessel classification within a fleet.

However, there is a wide range of classifying factors about each vessel routinely captured by the underwriting systems and several of these can be used to analyse the risks. We have identified the following factors, and this list may well not be exhaustive:

- Type of Vessel, up to 150 different types may well exist, but for rating purposes, these can be aggregated into ten or so categories
- Age of Vessel, probably banded in groups of five years
- Classification Society, 10 or 11 of the major Societies plus an "other" category
- Vessel Flag, 12 or so of the major Flag nations plus "other"
- Nationality, the owner's country of origin - grouped by region, with certain major countries (Greece, USA, Russia, China etc) separately identified
- Types and Levels of Deductibles

Claims Data

Different insurers hold different levels of detail on their claims systems. Some may be able to provide little beyond a total amount paid and a total outstanding estimate for each claim. If that is the case, then so be it. Ideally, however, for modelling purposes, the actuaries would prefer much more detailed information.

The client may wish to price separately for different aspects of the cover and if so, the actuaries will require the payments and out-

standing reserves broken down by the coverage aspects to be priced. For P&I these will probably include the following:

- Personal Injury, possibly further split between crew, passenger and other
- Collision Damage, with other vessels or with fixed and floating objects
- Pollution, especially oil
- Cargo
- Other

External fees would best be allocated back to the coverages they were related to.

One area open to discussion between actuaries and the client will be whether or not the client will supply a full claims transactional database so that the actuaries can construct full development triangles and evaluate IBNR/IBNER factors for each claim. An alternative approach is for the client to supply a flat claims file that simply shows the current position of each claim and supply their own IBNR factors to apply to the losses, derived, no doubt, from their own internal actuarial reserving work.

Data Manipulation

The key to successful price modelling is to obtain as much data as possible from the underwriting and claims systems. For these purposes, highly summarised report-style data from a Management Information System will probably not yield sufficient detail. For our purposes, the more detail we can have in the raw data, the better. While the thought of capturing the entire underwriting and claims databases for a large composite insurer may well sound daunting, most P&I databases are rather more manageable and with the power of modern PCs can be processed reasonably easily.

It is important to capture both sides of the client's data store - frequently today maintained in an orderly data warehouse structure - as valuable descriptive information of the type listed in the Rating Factors section will often only be reliably held on the underwriting side and the detailed claims cost information described above will usually only be held on the claims system.

So, the data needed will come essentially as two sources, an underwriting file consisting of single records for each exposure unit - probably a "vessel-year" - representing a unique combination of rating factor details for each period of risk, and a detailed claims file with information relating to every claim incurred by the exposure units on the underwriting file.

Our task then is to merge the files, eliminate errors and aggregate claims costs so that we end up with a manageable data file containing one record for each exposure unit with summarised claims information appended. During this stage, we will have applied IBNR/IBNER factors, possibly considered applying an inflation factor and capped individual claims at the various abatement and retention points that we will have agreed with the client.

Modelling

Having generated our database, the most important stage of our work is the modelling process itself.

For some time now, actuaries and statisticians have been applying a class of mathematical models known as Generalised Linear Models (GLM) to mass-volume insurance data to identify relationships between risks and establish relativities between different levels of rating factors.

In essence, a GLM creates a multi-dimensional representation of the data that enables the inter-dependent relationships in the data to be visualised in a way that would be quite impossible by inspection alone. Such relationships are obvious when there are only two rating factors and can be identified by simple one and two-way tables. Even with three factors, and a fair amount of patience, the various combinations of tabular analyses can be explored. But once the number of variables starts to climb, this quickly becomes impossible. GLM will explore the data using powerful statistical software and establish the relativities present and evaluate the statistical errors associated with the models derived. In this way, the actuary can evaluate the possible solutions indicated by the modelling process and select the models that best explain the variation in the data.

Validation

The final stage of the modelling process is to turn the GLM output into a set of relativities together with a base rate (suitably weighted to account for Club-wide overheads such as expenses, abated claims, share of Pooled claims, inflation, reinsurance costs) so that a modelled premium can then be calculated for each underwriting risk. The final derived model will probably be of a multiplicative type so that the base rate is multiplied by the appropriate relativity for each rating factor in turn.

Having derived the model, we then apply it to the underwriting information to compare the indicated premium for each risk with the actual premium charged so that we can check that the total indicated premium is sufficient to cover the historic losses. In such manner, the model is validated as presenting a reasonable

overall result and can then be shown to the client.

Hand-Over

Of course such an exercise would be a sterile piece of theoretical research if the underwriters themselves were unable to make use of it. So, the final part of our work is to present the findings in a language accessible to the underwriters (plain English might be a good idea!) and to convert the statistical output into a straightforward spreadsheet model that the underwriters can use to evaluate the risks themselves.

Nobody should suggest that from that point on, the underwriters should stick slavishly to the premiums indicated by the model - the pricing model is just one of the tools available to them. At the very least the underwriters will have the ability to calculate a basic rate for each risk which will form the basis of their on-going negotiations with their ship-owning members. They may agree a higher rate or be persuaded by the ship-owner that due to other factors (excellent ship-management and loss prevention systems, for instance), a discounted rate is justified. So be it. But the underwriter will know that he has agreed a discount because he will know that the pricing model yielded the higher numbers.

In future years, the updating and re-calibration of the model should be a straightforward task, which can quite possibly, with proper training and help, be carried out by the Club's own internal statistical staff.

While this article concentrates on P&I business, we believe that the process outlined above can be applied to most marine (and other) insurance books to help (re)insurers who wish to build pricing models.



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Marine Liability Pricing

Employers' Liability - a Product in Crisis?

Solvency II - Get Ready!

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Employers' Liability - a Product in Crisis?

David Sanders

There is a perceived crisis in the UK insurance market. Many individuals and companies can no longer obtain the cover that they desire at the same terms and prices that they have in the past. This issue is particularly acute for Employers' Liability business.

In this article we examine the basis of the perception and then consider where the market could go from here.

Background

Employers Liability ("EL") insurance is compulsory insurance - companies cannot trade legally without it.

By law, it must cover all risks to employees, and there can be neither exclusions nor deductibles.

Historically, premium rates have been below levels that are economically viable for the insurers.

There are numerous reasons for this, including market over-capacity (often with insurers fighting one another for business in order to achieve critical mass), naive capital, and poor management controls.

In some cases EL cover has been sold as a loss leader, in order to attract and retain buyers of other more lucrative products.

During this protracted period of under-pricing, the market has seen the growing emergence of latent claims.

During the early 1990s in particular, EL insurers were hit with claims for industrial deafness and for asbestos-related diseases.

Few insurers had allowed for such claims within their reserves; those that had soon realised that their allowances were inadequate.

The consequence has been several high-profile insurance insolvencies (e.g. Chester Street).

The UK Courts have compounded insurers' woes by imposing, retrospectively, various legal changes, such as the use of the Ogden tables.

Many of these changes have increased the potential cost of unsettled claims, and have widened the scope for liability, for example in respect of mesothelioma cases.

Underlying this has been a gradual shift in the UK towards a compensation culture. Lord Justice Bingham stated in his decision on *Fairchild v. Glenhaven*:

"I am of the opinion that such injustice as may be involved in imposing liability on a duty-breaking employer in these circumstances is heavily outweighed by the injustice of denying redress to a victim."

In other words, it is now considered, legally, more important to ensure that victims have appropriate redress than that the redress comes from properly identified duty-breakers.

There is nothing intrinsically wrong with this move towards a compensation culture - presumably UK Society views it as fair, otherwise there would be public outcry over court decisions.

But insurers understandably regard it as blatantly unfair that they should meet the cost of claims that would have been inadmissible when the original policies were taken out, and which therefore were not allowed for in the pricing. UK Society has to recognise, and accept, that the widened scope of liability has significant cost and premium implications going forward.

However, one should not overstate the impact of these latent claims and legal changes upon the financial health of EL insurers.

Even without them, the business has been unprofitable, with insurers historically relying heavily on investment income to meet the payment of claims.

With investment returns now severely reduced, this avenue is no longer open to them.

Market reaction

So how has the market reacted to this double whammy of inadequate premium rating and spiralling claims costs?

Some insurers, fearing the emergence of further unforeseen sources of claims, have cut back their exposure to the EL market, in favour of writing lines of business that are considered less risky and more profitable.

This reduction in capacity has been compounded by increased reinsurance costs and terms which have virtually excluded certain risks. As a consequence, almost all insureds are seeing big premium increases, irrespective of their actual claims experience.

Some types of employers, in "riskier" occupations (e.g. scaffolding) are struggling to obtain any cover.

This lack of capacity has resulted in major disquiet, with certain employers facing the dilemma of either operating illegally or going out of business, and with calls from MPs, unions and industry bodies for Government intervention.

Both the Department of Work and Pensions ("DWP") and the Office of Fair Trading ("OFT") have undertaken reviews of liability insurance.

Many of the recommendations in the initial reports of the OFT and DWP coincide, especially regarding the simplification (and hence reduced cost) of the legal processes associated with EL claims.

The DWP report goes further and suggests that the insurance market consider a radical overhaul of EL cover itself.



The options

Various ideas for such an overhaul have been floated in recent years. We set out some of these below.

Option 1

Separate EL cover into two parts, one to cover “accident” claims, the other “health” claims

Accident cover would be easier to price and to underwrite, and so a ready supply of providers could be expected. Health cover would include latent claims, and would be harder to price and to underwrite. As such it would be less attractive to providers. What constitutes accident claims and what health claims would need careful definition, to prevent gaps in cover or confusion as to which cover applies.

Option 2

Wider use of captives

It may be possible to set up captives for groups of employers that find cover difficult to obtain. This could be an expensive option. The captive would require initial capitalisation and, relative to the risk premiums, the operating costs might be disproportionately high. Reinsurance for the higher layers of cover would still be required using captives would not create more capacity in the reinsurance market.

Option 3

Set up an insurance pool

This could contain business for which the market is unwilling to provide a quotation or underwrite on normal terms. Insurers operating elsewhere in the market would be obliged to take a portion of these low quality risks as a condition of writing business. This could also be operated in conjunction with Option 1.

A key issue here would be who should determine the premium rates.

Option 4

Extend the National Insurance scheme

EL premiums are in general small when compared with NI charges. As the NI scheme already delivers many benefits closely related to EL cover, it should be possible to extend the NI scheme to cover all EL claims without a significant increase in costs, especially were insurers to retain the administration of claims.

Conclusion

There are a number of forces vying against each other. Insureds want cheap solutions, especially in the current economic environment, yet Society wants to see increasing levels of compensation pay-outs.

The British public sees no contradiction in these two desires. Partially that is due to a warped public view of insurers.

The OFT report took great pains to explain that, rather than making huge profits as many employers and trade and industry bodies believed, insurers had consistently lost money writing EL cover.

The Government appears unwilling to intervene, probably because it fears such intervention would increase an already overburdened bureaucracy, and would require funding out of taxation.

So the solution remains with the insurers and the insureds.

The insurers must improve their customers' awareness of the true cost of risk transfer, and must work to understand better the risks that they are being asked to accept.

That might lead to changes in product design, to increase the transparency between the price and the risk.

The customers, meanwhile, need to manage better their risks and to identify clearly the risks that they wish to transfer.

Insurance is a partnership between insurer and insured, and both sides need to work hard at understanding the other, so as to enhance the mutually beneficial nature of the relationship.



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Solvency II - Get Ready!

Gary Wells

The present European Union insurance solvency system is based around three principles: adequate reserves / provisions, appropriate investments and a minimum capital requirement. While the system has served the EU well, its high level approach is open to criticism. Further, the fast changing business world of recent years has radically altered the environment in which insurers now operate. In consequence, in May 2001, the EU initiated a full review of the assessment of insurance solvency.

The review has comprised two parts, imaginatively entitled Solvency I and Solvency II. Solvency I was effectively a tweaking of the existing system, and directives making various amendments to the existing solvency rules were adopted by the EU in February last year. It was a holding operation, pending the outcome of Solvency II which is a fundamental review of all the rules for assessing the overall financial position of insurance companies.

While Solvency II is currently in progress it is difficult to estimate the time scale for the Commission's proposal (2004?) and implementation (2005 - 2007?) of this new framework. However, such uncertainty on time-scales and shape should not be used as an excuse for inaction. Insurers can and should be taking steps to get ready for Solvency II.

Aims of Solvency II

The aims of Solvency II are essentially to develop a solvency system that provides supervisors with an adequate buffer / time-frame to identify and remedy adverse experience so as to protect policyholders.

The system is also to be designed to establish a solvency margin requirement that is better matched to the true risks being run by insurers, and at the same time avoid undue complexity and distortion to competition.

The Commission has now established the following principles regarding the future solvency system for the EU:

- it must be geared to the risks companies run;
- it must be adaptable to future developments in international prudential and accounting standards;
- it must avoid proliferation of reporting systems and regulatory arbitrage.

Using the three-pillar approach of Basel II, the Commission grouped these ideas into "pillars" as set out below.

First Pillar

Pillar I contains quantitative requirements such as rules on Non-Life (and Life) technical provisions, investments and capital.

The Commission has identified the need for a new concept of a "Target" capital requirement, based on the need for economic capital at a certain probability of ruin. Within that insurers must hold a more easily calculated lower, absolute minimum level of capital ("Safeguard" capital). Thus capital will be measured at two clearly differentiated levels.

It is proposed that insurers themselves will assess the "Target" capital they need, and that ultimately the level of such capital will be derived from internal risk models developed by actuaries and other quantitative practitioners.

For this to work effectively there will also need to be a common level of prudence with regard to technical provisions and investment policy.

Second Pillar

Pillar II comprises rules on risk management, internal controls and administrative organisation. In order to verify an insurer's risk management the Commission will employ a reinforced supervisory review process which takes account of the risks associated with an insurer's structure and management approach. In particular, the introduction of "Target" capital is to be supported by better defined rules on the risk assessment methodologies applied by supervisors and their powers of intervention.

Third Pillar

Pillar III is to be a set of rules designed to encourage market discipline. This will focus on published financial information (to be co-ordinated with the work being done on Fair Value Accounting), and information given to policyholders.

Challenges

Whatever the final outcome, Solvency II is a radical step forward and thus presents a number of big challenges to insurers. Pillar I involves a quantitative approach to risk assessment and introduces the concept of "Target" capital, supported by internal models. While such models are not new to the insurance industry (many EU insurers have already developed models to identify and measure risk) they will have to be approved by each insurer's national supervisor and this is likely to be a very lengthy process.

Further, current models may only be partially suitable, e.g. they might deal only with specific risks. For internal models to be suitable for deriving "Target" capital amounts they must look at risks in an integrated fashion. Again while such models do exist (e.g. dynamic

financial analysis models), they are complex, difficult to understand, and presently lack any standardisation.

Pillar II introduces rules on risk management, internal controls and administrative organisation. Insurers, therefore, need to plan for much greater board level accountability, subject to closer supervisory review than hitherto.

The challenges outlined above should not be underestimated, and insurers should now be taking steps to prepare, e.g. collecting data, reviewing risk management processes and developing internal models.

Those familiar with the UK regulatory regime, will see that many of the general principles of Solvency II are similar to those being proposed by the FSA in its new regulatory regime for insurers. However, the UK has a vastly accelerated timetable for implementation, with the regime planned to go live by the end of 2004! It is, therefore, doubly important and urgent that UK insurers prepare and embrace wholeheartedly the demands of a risk based capital solvency system.

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