

September 2010

## Casualty Advisory Update

### **Annuities in Third Party Bodily Injury Claims Settlements in Europe: Do They Have a Future Role to Play in Casualty Reinsurance?**

Annuities have long been used to indemnify third party bodily injury victims by providing them with a guaranteed source of regular income. The indexed annuity has been a commonly accepted method of settling third parties' loss of earnings and long-term care costs arising from the accidental injuries in jurisdictions where a) the cost of care has not been absorbed by a national scheme but has been passed to the private insurance industry (either directly or by way of recourse) and b) the courts (or out-of-court settlements) have awarded structured or rest-of-life settlements as opposed to lump sum payments.

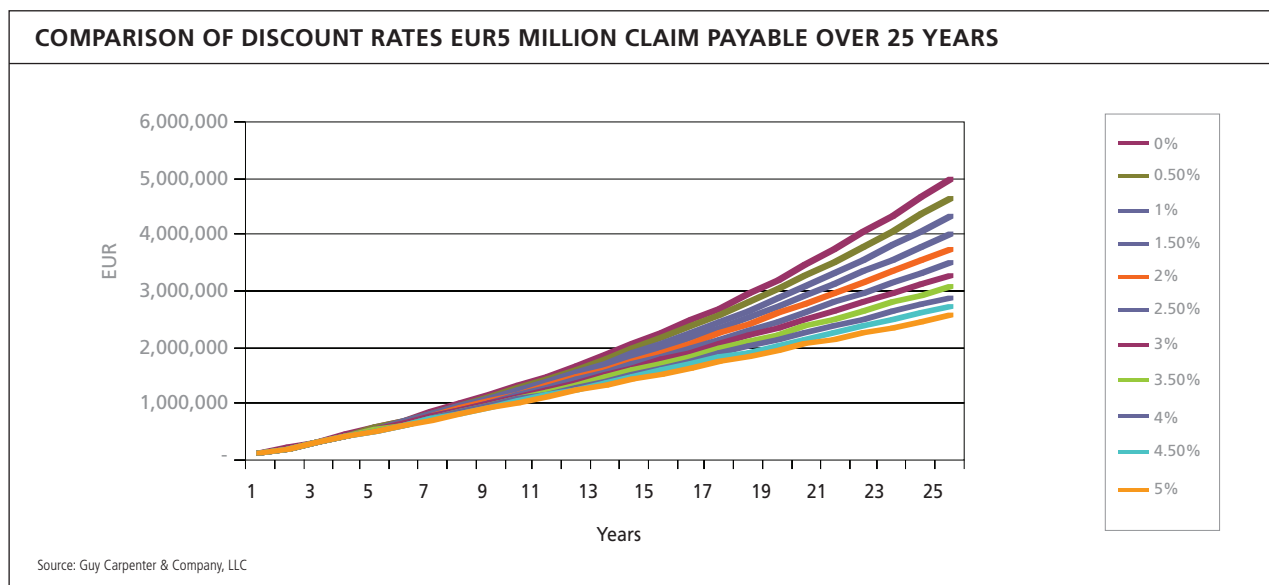
The combination of a) the transfer, in cases where negligence can be proved, of the injury-related cost of care from the state to the private third party liability insurer and b) long pay-out patterns, has historically been a characteristic of bodily injury claims in France and Germany. It is therefore logical that annuities have been used the most in these two jurisdictions.

In other Western European territories, lump sum settlements have been favored for most large bodily injury settlements. Annuities have only been used in cases where the judge considers that assets need to be protected to ensure that funds for long-term care remain available.

Over the last decade, however, annuities have increasingly been demanded by plaintiffs in jurisdictions across Central and Eastern Europe, most notably in the Czech Republic and in Poland. Annuities have also now come into focus in the UK as a result of the introduction of period payment orders under the Courts Act 2003.

In the current low interest rate environment, fixed annuities, especially indexed annuities, have become prohibitively expensive to purchase. The market for impaired life fixed annuities is currently almost non-existent, so there are few annuity products priced to reflect a lower-than-expected life expectancy. With very little net present value discount available, the market for fixed annuities has become unattractive, and has left insurers and their reinsurers unwilling to purchase annuities from life insurers as part of a structured settlement, preferring instead to reserve the annuity liability on their own balance sheets and bear the long-term investment risk themselves.

Let us assume a hypothetical case of a third party bodily injury award where the judge provides for the victim to receive regular monthly indexed payments for the rest of his/her life. The remaining life expectancy is calculated, using a standard mortality table, at 25 years, even though there is a strong probability that the victim may only live for a shorter period. The cumulative value of the monthly payments, indexed at an annual rate of 5 percent for the 25 year period, is calculated at EUR5 million. In the graph below, we can see a comparison of the approximate purchase price of an annuity, given a range of discount rates between 0 percent and 5 percent:



The net present value of the monthly payments discounted at 5 percent amounts to EUR2.56 million but if the discount factor is reduced to 2 percent, the up-front payment to finance the annuity increases by 46.5 percent to EUR3.75 million. The larger the difference between the annuity discount rate and the rate of indexation to be applied to the payments, the larger will be the capitalization required to finance the future payments.

In Germany, insurers and reinsurers enjoy an advantage related to the fact that existing legislation has not been updated to reflect the current economic environment. The long-term discount rate specified in the relevant German insurance law (BGH [Federal High Court] decisions affecting insurance law in practice as well tax law) is still at 5 percent, whether for direct claims from the injured party or for recourse. The current legal guidelines still regard a 5 percent investment return as being achievable over the long term and at the same time project that the long-term cost of care will not increase at a rate of inflation above 5 percent.

Under the HGB (Handelsgesetzbuch) German commercial legal accounting rules, the German insurer would hold the reserve in any case on an undiscounted basis, but the 5 percent growth rate would be assumed to match the expected costs inflation. If the same insurer were, however, to purchase an annuity in today's life insurance market to cover the expected liabilities over 25 years, the discount rate would fall far short of the projected 5 percent growth rate.

The purchase of an annuity would, furthermore, only allow the insurer to close the claim if the injured third party were to accept such annuity or equivalent lump sum as a full and final settlement. In Germany, the injured third party rarely agrees to such annuity or lump sum as full and final settlement of their claim because this would remove their right to return to the court for a re-appraisal of their award in the case of deterioration as a result of their injuries. Hence large bodily injury claims are seldom capitalized in the German market.

From a reinsurance perspective, in accordance with the German contract wordings, it is only when the aggregate of monthly payments reaches the (indexed) attachment point of the liability excess of loss (XOL) reinsurance contract that the reinsurer begins to pay the claim. In the case of the early death of the injured party, the insurer will only have paid a portion of the expected total claim and the reinsurer will be able to close his reserve without payment. On the other hand, there is the risk of the German claimant returning to the court to demand an increased monthly payment on the basis of a worsened condition.

Thus, even if the reinsurer were to use an annuity to purchase-out his future liabilities, he would still be left holding the deterioration risk on his balance sheet, so the annuity purchase would not allow him to close the file. The alternative option for the reinsurer of commuting the outstanding liabilities with their cedent through capitalization of outstanding losses is also rarely used in Germany, because the cedent will require a substantial IBNER (incurred but not enough reported) provision for the deterioration risk. Without the ability to achieve a full and final settlement of liabilities, there is little incentive for the reinsurer to capitalize losses. It is, therefore, not surprising that German insurers and their reinsurers choose to hold these long-term recurring payment liabilities on their own respective balance sheets, and it is unlikely that the purchase of annuity products or any other form of capitalization will play a role in the settlement of German third-party bodily injury claims in the near future.

In France, by contrast, annuities continue to play a major role. Most severe bodily injury cases in France are settled by means of an indexed annuity. For motor accidents, the indexation part is reimbursed to insurers by the “Fonds de Garantie des Assurances Obligatoires” (FGAO). Strict rules have been established by the French state: present value is calculated using the 1988/90 mortality table and a discount rate which is not allowed to exceed 60 percent of the average return on government bonds (TME-Taux Moyen d’emprunt), capped at a maximum of 3.5 percent per year.

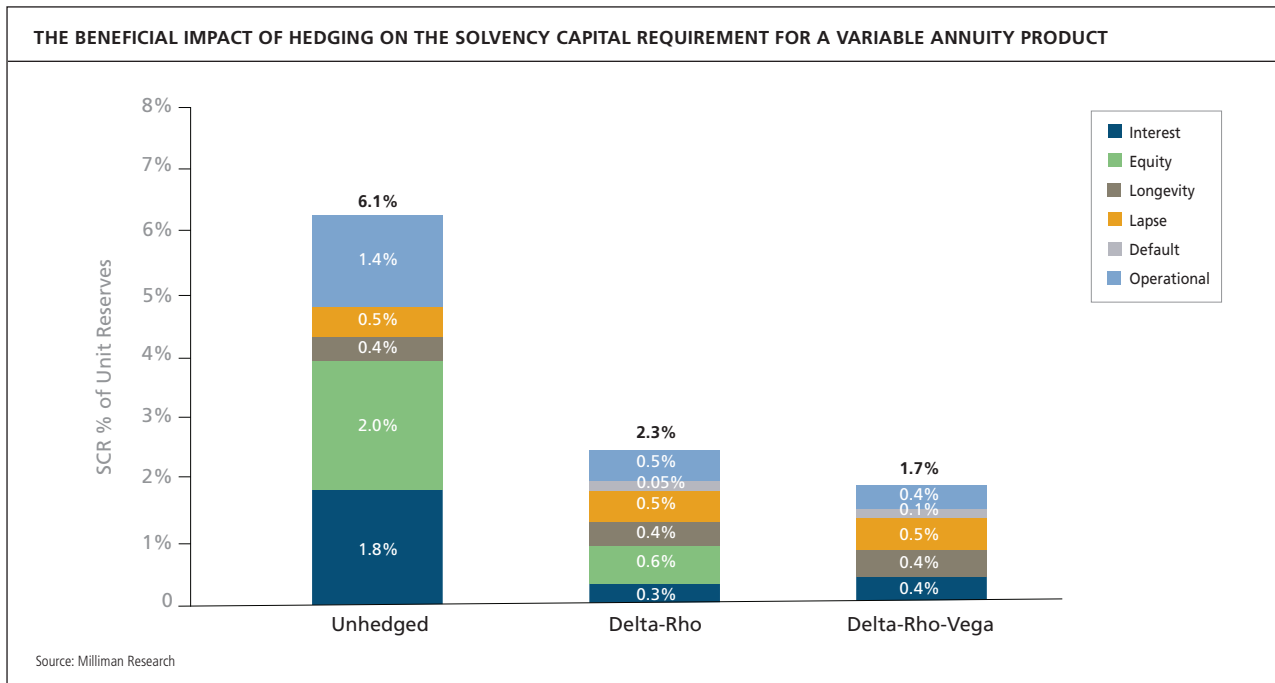
Increasingly, French cedents have a clause in their motor third-party liability XOL treaties that provides for reinsurers to pay the capitalization in full and then have the benefit of a commutation of their liabilities under these compulsory annuities. It is of course in the cedent’s interest to negotiate the lowest possible discount rate to maximize the capital sum payable by the reinsurer, but this in turn will have an effect on the reinsurance cost. In fact, most reinsurers are already offering treaty conditions which encourage cedents to retain a contractually fixed discount rate. Equally important is the preservation of the right to re-open the loss in the case of a worsening of the injured party’s condition. There is pressure from reinsurers to limit the period during which the case can be re-opened down to 10 or even 5 years. The preservation of an unlimited period for re-opening annuity reserves can add 15 percent to 30 percent to the reinsurance rate. In general, the treaty conditions will provide for an automatic reimbursement to reinsurers of the excess amount paid when a cedent stops paying the annuity within a period of 5 years from the date the annuity is established.

The high cost of annuities clearly has a critical effect on liability XOL reinsurance pricing. If a reinsurer is obliged at the present time to fund the purchase of an indexed annuity or capitalize the loss through straight transfer of funds to the cedent, he will have to face an extremely costly gap between the present value discount calculated using a depressed rate of investment return and the potentially much higher index rate being set for future payments to cover the cost of care.

The experience of the French and German markets now provides an interesting source of reference for UK cedents to consider. In the UK, the provisions of the Courts Act 2003 have left insurers and their reinsurers exposed to long-term structured payments for the first time, and this has led to a major discussion regarding the capitalization of losses, including the possibility of purchase of an annuity to finance such future recurring payments. Faced with the prospect of a variation order, the UK cedent is taking back a significant potential exposure if he allows the reinsurer to commute at an early stage, but the reinsurer is equally reluctant to capitalize the loss if he is obliged to re-open the case at a later date.

UK cedents and their reinsurers are confronted therefore by a choice: should they, like the Germans, simply hold onto their long-term obligations and manage them? Or should they, like the French, adopt the annuity system and seek wherever possible to buy-out their liabilities? The low discount rate and lack of fixed annuity products available on the UK life market, combined with the potential exposure to a variation order, does not suggest that the future lies with traditional fixed annuities.

A better rate of return should be available through the use of variable annuities, and these products are now actively being considered by liability insurers across Europe as a means to commute guaranteed long-term regular payment liabilities. The problem is to convince third party victims to accept variable annuities as an alternative to fixed annuities for final settlements. Since they are unit-linked, they are associated with a higher risk of downturn and are sensitive to changing capital market parameters, such as interest rates ( $\rho$ ), volatility (Vega), and equity prices ( $\Delta$ ). The insurer will, therefore, usually be left with a residual liability in the case of failure of the variable annuity to provide the required level of monthly indemnity. An active hedge strategy can, however, be implemented to manage the downside risk and reduce the heavy solvency capital requirement under Solvency II of unhedged asset risk. The diagram on the following page illustrates the beneficial impact of hedging on the Solvency Capital Requirement for a variable annuity product.



## Conclusion

Fixed annuities are an expensive option for settlement of severe bodily injury claims in the current economic environment. They may appear to state legislators as a sensible provision to ensure the long-term financing of the victims' cost of care, but the victims themselves may think they can get a higher return by managing their own investment of a lump sum. Fixed annuities also hold little attraction for insurers and reinsurers, especially where a residual risk of variation remains.

Perhaps the variable annuity will provide the answer. It is a product that can guarantee long-term payments but can be purchased at a higher discount rate thanks to a higher expected rate of return. If hedging can reduce the inherent riskiness, it is a product that could be attractive to both claimants and (re)insurers.

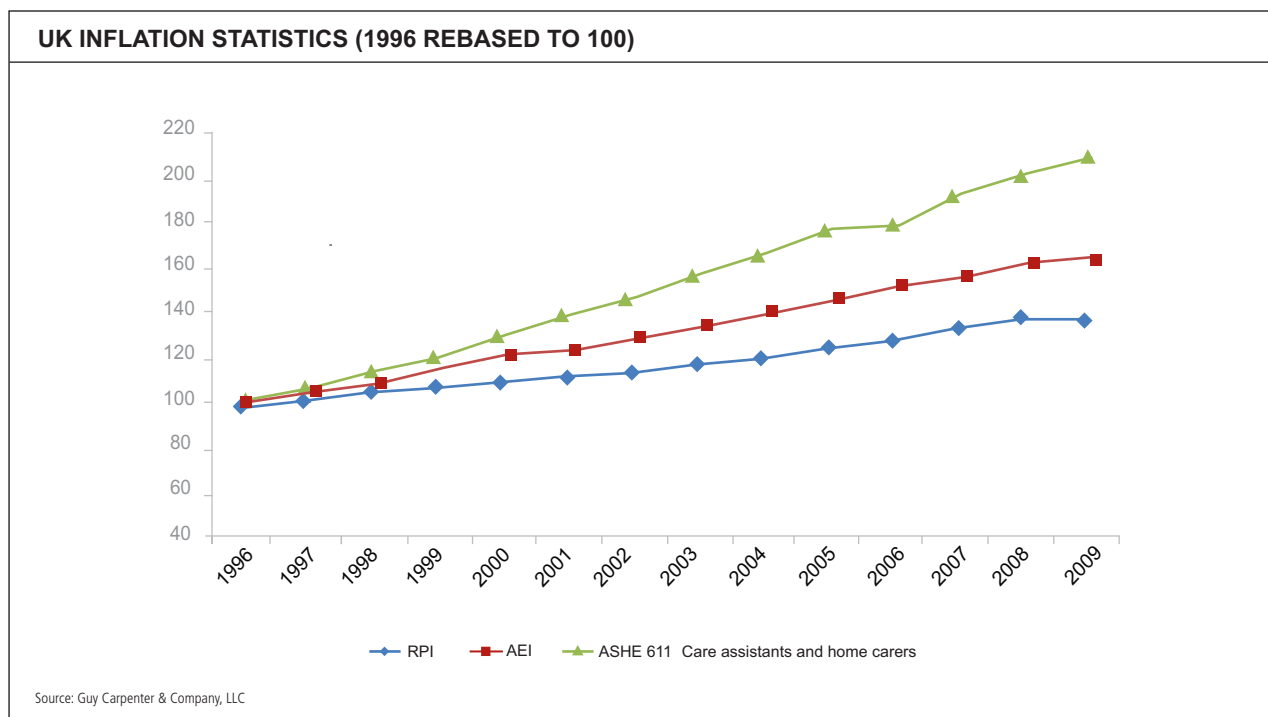
## Periodic Payment Orders – Issues and Implications for Reinsurance

### Issues

Following the passage of the Courts Act 2003, which gave courts in England and Wales the power to impose rest-of-life structured settlements, known as periodical payment orders (PPOs) to provide for the long-term care and loss of earnings of severely injured third parties, the actual incidence of such awards in the market has been relatively low. It is clear however that the trend towards PPOs has accelerated over the past year, partly driven by low interest rates. This trend presents real challenges to both insurers and reinsurers of casualty classes, particularly for motor.

A PPO imposes several risks on the insurer that for a traditional lump sum payment would rest with the claimant :

- Longevity risk – if a claimant lives longer than the medical experts predict at the date of settlement, then a lump sum award may prove to be insufficient to fund his care for his entire life. With a PPO, this longevity risk rests with the insurer.
- Investment risk – a lump sum award incorporates assumptions about future investment returns, which may not, in practice, be achievable. A PPO transfers this risk from the claimant to the insurer.
- Future inflation risk – under a lump sum award, the claimant assumes the risk that the future cost of care may run ahead of expectations. An indexed PPO again transfers this risk to the insurer.



A PPO in itself causes an insurer new problems, such as how to reserve for what is essentially an unknown ultimate cost. The additional problem associated with inflation risk is that the courts have determined, in two much reported cases, that the indexation of the PPOs will be effected by reference to two indices (average earnings for loss of earnings and ASHE 6115 for the cost of care). Both of these indices have historically risen faster than retail prices index (RPI), which the drafters of the Courts Act had originally intended to be used. If this pattern continues in the future, the ultimate cost of a PPO linked to average earnings would be higher than one linked to the RPI.

Of course, small differences in annual rates of inflation between the indices over the life of a lengthy PPO could potentially make a huge difference to the final payout. It is not difficult to come up with examples, based upon assumptions on loss of earnings, cost of care, and life expectancy, where the compound effect of the switch of indices can have a very significant impact on the total payout under a PPO.

### **Hedging the Risks Using Annuities and Capital Markets**

Of course, the risks of longevity, inflation, and investment are traditionally handled by the life assurance market and ideally insurers would be able to transfer these risks to the life market by the purchase of annuities. Unfortunately, the impaired annuity market in the UK currently concentrates on moderate impairments from medical conditions, not severe impairments such as those suffered by accident victims, that would be subject to PPOs. While certain life insurers are beginning to show an interest in this issue, which should, after all, be an opportunity for them, it could be a considerable time before a proper market develops for this and it may never develop for certain types of injuries.

At present it is clear that life companies will be more interested in offering capacity where:

- A 'block' of PPOs can be offered, either historic or prospective
- Individual risks can be medically underwritten
- The longevity risk only is covered

Some annuity writers prefer to take the investment risk as well as the longevity risk, but at present these companies are reluctant to look at reinsuring PPOs as the inflation risk (ASHE 6115) is not hedgable.

A hedge against ASHE 6115 is, at present, not available, although GC Securities\*, a division of MMC Securities (Europe) Ltd., which is authorized and regulated by the Financial Services Authority, was very close to negotiating one in 2007 before the credit crisis took such projects off the agenda for all financial institutions. With a critical mass of PPOs in the market and a return to more normal risk appetites in the financial markets, such products could become available in the future.

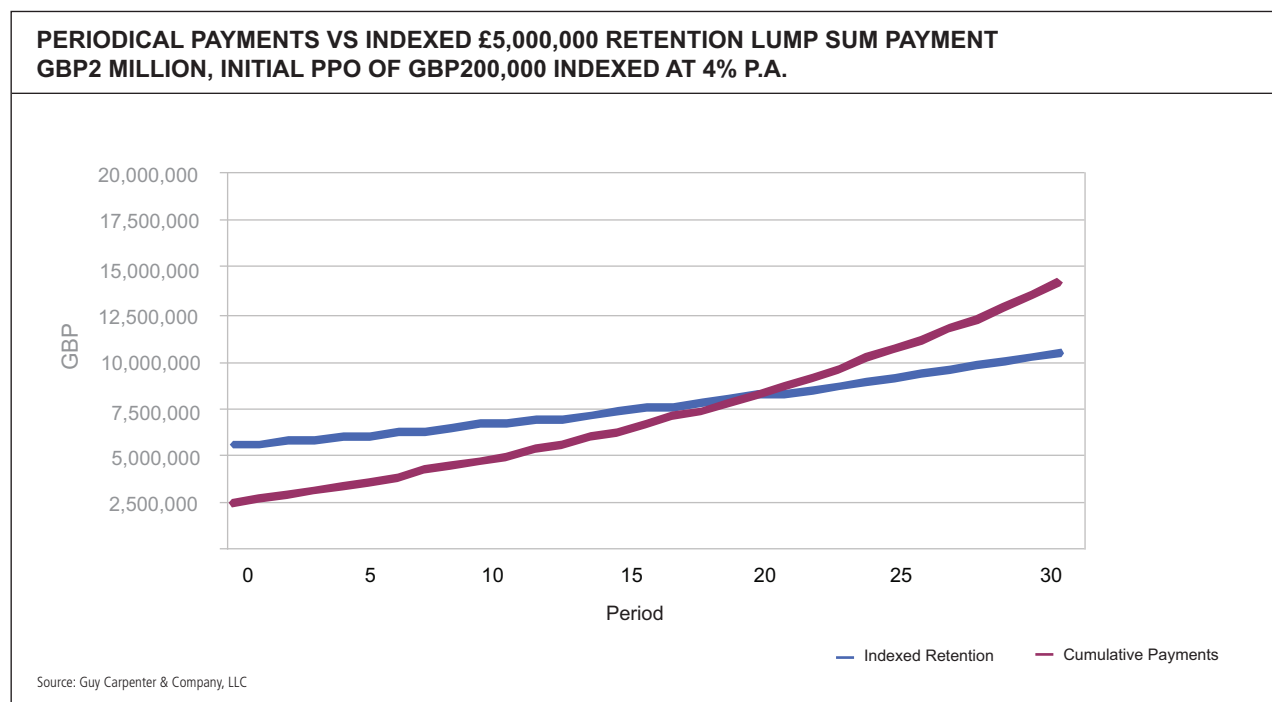
In certain continental European countries, many insurers with exposure to the equivalent of PPOs are composite writers with a life as well as a property/casualty business. In these cases, the life company usually writes the impaired annuity for its sister company. Of course, this is advantageous because it keeps any profits 'in the family'.

The lack of market for impaired life annuities in the UK may well mean that other solutions will emerge, such as the formation of an industry captive or a pooling arrangement, whereby the exposures under PPOs are assumed by a separate company, funded by means of contributions from motor insurers.

### Periodic Payment Orders – The Implications for Reinsurance

PPOs present particular challenges to reinsurers and the cover they provide under XOL reinsurance structures. It is an obvious point to make that a PPO will push a reinsurance recovery well into the future, a problem exacerbated by the effect of an indexation clause that is common on most UK motor programs. The standard UK Index Clause, for example, indexes the reinsurance retention, initially to average earnings, but once a PPO is awarded or agreed, the index to be applied to the retention changes to that on which the PPO is indexed. Assuming the past relationship between the various indices continues, the effect of the switch of index will be to push a reinsurance recovery even further into the future (the index is applied to each installment).

This problem is worse for larger buyers of reinsurance who typically run significant retentions. To illustrate this, consider a PPO settled with a lump sum award of GBP2 million and periodic payments of GBP200,000 per annum, indexed to ASHE 6115. In comparison to most PPOs seen to date, these are reasonably big numbers. Assume a GBP5 million indexed retention and a three-year-delay from the date of the accident and the PPO.



Even for a 'large' PPO such as this, and on reasonably realistic assumptions about earnings inflation, pre-PPO, and ASHE inflation post-PPO, this claim would take approximately 20 years to impact the reinsurance program<sup>1</sup>.

This is a situation that the reinsurance market needs to address. As it stands in the absence of an annuity purchase, buyers of excess of loss reinsurance are faced with the prospect of self-funding a PPO loss, possibly for many years, with only the distant prospect of a contribution from reinsurers. In the meantime, buyers will be running a potentially significant credit risk, an area of some sensitivity in the current climate. An additional problem confronting both cedent and reinsurer is how to account for the future liabilities from a PPO. As yet, no universal approach has been adopted.

### **Periodic Payment Orders - Possible Reinsurance Approaches**

#### *Capitalization of Reinsurers' Share of a PPO*

A number of Guy Carpenter's long-tail clients in the UK have expressed a general preference for capitalization of claims mainly because of the credit risk mentioned above. Equally, we believe that most reinsurers will be well disposed towards capitalizing PPOs as they will wish to get the liability (and the attendant uncertainty) off of their balance sheet(s). If both sides of the transaction favor capitalization, then it should be relatively easy to accomplish.

Several UK insurers have already received indicative quotations from reinsurers for the capitalization of individual PPOs, and it is already clear that such capitalization negotiations will revolve around reinsurers' and reinsureds' views of the three risks identified above, namely longevity, future inflation of the PPO and future investment returns. In reality, reinsurers' views of these factors may well be very different from the cedents' and could easily cause a difference in valuation of several million pounds on an individual claim. To reduce the potential for this, it might be possible to agree to a formulaic approach, at least to the risks of inflation and investment returns.

While the capitalization of a PPO will remove the reinsurer credit risk, it will leave the primary insurer with the risks of longevity and inflation. These risks may, in time, cause insurers to reject capitalization as a universal solution. A reinsurer's 'promise to pay' may simply be the best asset available to set against the PPO liability. As the Solvency II treatment of PPOs becomes clearer, the balance of costs and benefits of capitalization will also become clearer.

#### *Capitalization Clause, with Arbitration*

As discussed above, the problem with capitalizing a claim is that, when it is necessary (i.e., after the PPO award), reinsurers may well come up with a capitalization offer that is significantly less than the buyer's own evaluation. In the past year or so, the market has seen at least two attempts to introduce clauses into reinsurance contracts (i.e., pre-loss) that would set out the process to be followed to ensure an 'agreed' capitalization of future PPOs. In both cases this involved a form of binding arbitration on those parts of capitalization negotiation not dealt with by a formula. Not surprisingly, given the market's lack of experience in dealing with PPOs and the fact that the primary carrier would retain the longevity risk, buyers' reaction to these initiatives has been, and remains, less than enthusiastic.

<sup>1</sup> Of course, for a buyer with a lower retention, recoveries occur much quicker and, for the loss example given, a retention of GBP2 million or less means that the buyer recovers the periodic element of the PPO as it is paid.

The PPO landscape is fast changing, but our current view is that any compulsory element is not likely to gain wide acceptance among buyers until there are sufficient numbers of PPOs in the market to give all parties comfort with the process, and to be able to take a ‘some you win, some you lose’ view of unexpected longevity and inflation outturns. However, we believe that a form of non-binding arbitration is worth pursuing.

#### *Amendment to the Indexation Clause to Produce Fairer Treatment of PPOs*

As we showed above, the problem PPOs present to traditional excess of loss contracts is exacerbated by the effect of the index clause in moving the date of reinsurance recovery even further into the future. Another possible approach is to amend the index clause, effectively to freeze the index (and the retention) at the date the PPO is awarded. It seems somewhat arbitrary that with a lump sum award the index is fixed at the date of payment, but if a PPO is awarded then the retention is indexed for decades into the future, with a subsequent delay and reduction in the reinsurance recovery. We believe that the logic for this approach needs to be questioned in the market. Indexation exists to preserve the “real” value of the retention. A PPO is awarded in lieu of a lump sum but because the PPO is itself indexed then indexing the reinsurance retention means that the burden of claims inflation falls too heavily onto the buyer.

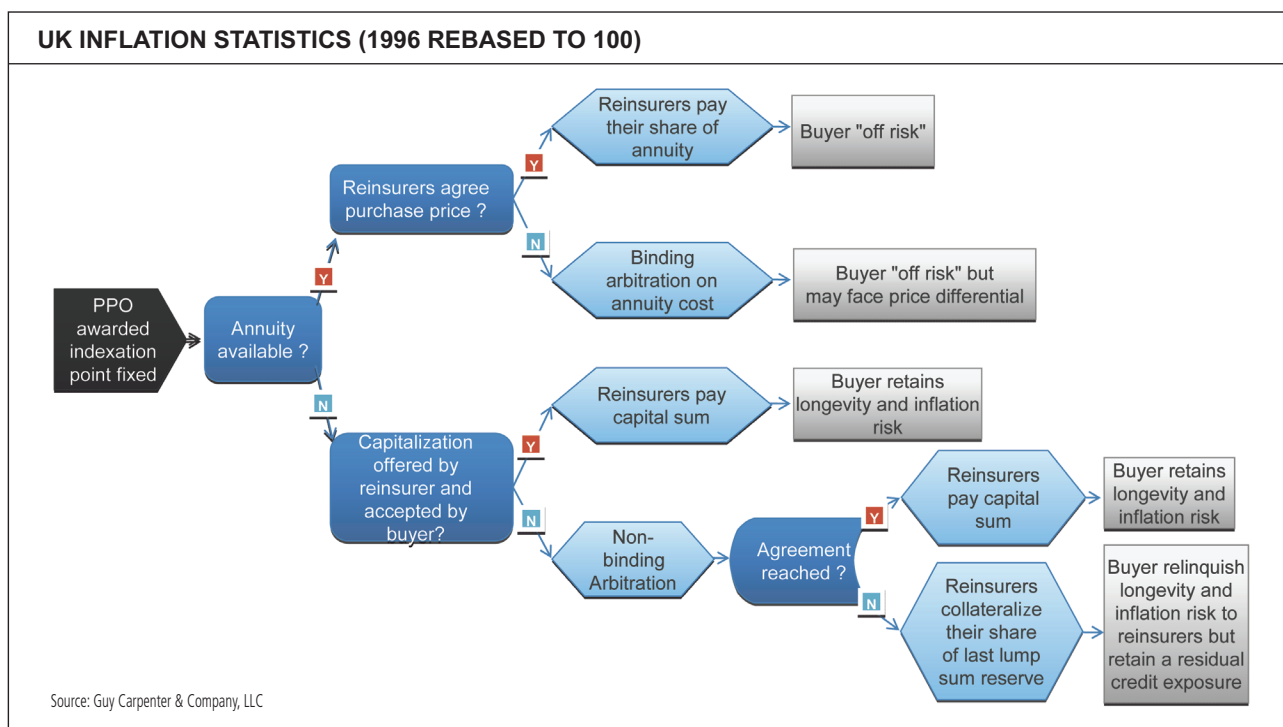
#### *Collateralization of Reinsurers’ Liability Under a PPO*

The most commonly used structure in annuity reinsurance is for assets equivalent to the expected value of reinsurers’ obligations to be deposited with a mutually satisfactory custodian in a segregated securities account in the name of the reinsurer, but subject to a charge in favor of the cedent. In these arrangements it is important to establish an effective security interest in favor of the cedent, but the key is to ensure that the reinsurer’s rights to access the assets are appropriately restricted and that the cedent will have timely access to those assets on the occurrence of a trigger event (such as insolvency or an obvious precursor to such). The charge would ideally be structured to fall within the Financial Collateral Arrangements (No 2) Regulations. In cases where this form of collateral has been established cedents have not had to make a provision for reinsurance credit risk within the requirements of INSPUU 2.1.

There are a number of other methods of obtaining security but none are as efficient as the charged account described above. These include irrecoverable letters of credit with “evergreen clauses”, trusts, and parent company guarantees.

### The Future

Looking ahead the PPO landscape is not clear. Much will depend on how many PPOs are awarded or negotiated in the next few years. However, assuming that recent trends continue, more choices will open up for cedents: we expect markets to become more willing to take on liabilities and that reinsurance contracts will evolve to redress the balance of power towards buyers of excess of loss reinsurance. The following diagram represents what we believe will be possible within the next two years.

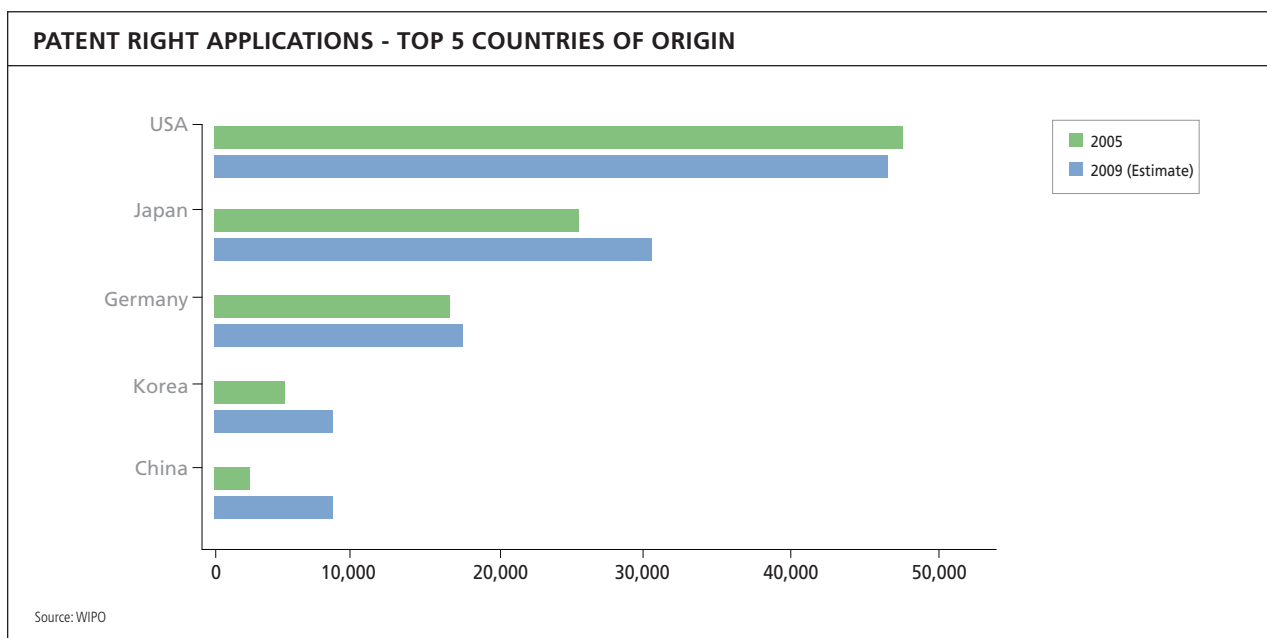


### Intellectual Property Risk Management in Asia: A Growing Concern

The strategic importance of intellectual-asset management has undeniably increased in Asia in recent years. Since the integration of China into the world economy the Chinese government has been placing increasing value on intellectual property rights (IPR) and its protection. The country’s patent office now leads the world in patent applications.

According to the World Intellectual Property Organization (WIPO), in 2007 China and the Republic of Korea generated more patent applications per gross domestic product than did the United States.

In the last two years many Asian countries have strengthened their IPR enforcement apparatus. Taiwan, for example, established a specific intellectual property court in 2008.



A growing number of companies use the intellectual capital protection enforcement mechanism actively to grow and maintain market share. A greater number of patent lawsuits are filed in China than anywhere else globally. Headline-making victories, such as the one against Schneider Electric of France resulting in a settlement of USD23 million, will increase the awareness that China is a place to both obtain and enforce IPR. However, overall, the damage awards in China have remained small. According to a study by NERA, and affiliate of Guy Carpenter, more than 90 percent of all IPR damages awarded in China are below USD100,000 in value.

However, broadly viewed, Asian firms increasingly seek patent protection abroad; especially in areas of technological leadership, such as information technology, semiconductors, and optoelectronic (e.g., LCD, plasma display).

All of these trends are important because they are likely to stimulate the demand for adequate (re)insurance protection.

### **The Modern Company, a Collection of Capabilities**

The most important assets of modern business no longer exist in only physical form, but also constitute intangible property. Seventy-five percent of the value of publicly traded companies in the United States comes from intangible assets.

The four main types of intellectual property owned by business are copyrights (material such as literature, art, music, sound recordings, and broadcasts); designs (visual appearance or eye appeal of products); trademarks (signs that can distinguish the goods of one trader from those of another), and patents (technical and functional aspects of products and processes).

Each of these intellectual property rights share common characteristics:

- Property rights:  
IPRs can be bought and sold, mortgaged, and licensed
- Monopolistic nature:  
The IPR owner is the only person who can exploit the right
- Territorial nature:  
The IPR is only effective in the territory of the state granting that right
- Justification:  
The legal protection of IPR requires justification

### **Available Insurance Products**

Insurance solutions can generally be categorized into three main groups:

- Litigation only:  
Legal costs incurred in pursuing those who infringe IPRs are covered
- Revenue protection:  
Provides coverage in case a successful legal challenge to the IPR results in the prevention or prohibition of the exploitation of the right
- Liability protection:  
Comprehensive cover providing indemnity for damages owed to third parties, legal costs incurred in defending intellectual property infringement claims, and legal costs incurred in defending an injunction claim

Policy limits typically range between USD10 million and USD50 million and attach above frequency loss level. The application of an additional co-insurance of 5 percent to 10 percent is not unusual. The underwriting process often includes an audit of the applicant's intellectual property risk management program.

### **Opportunities for Specialty Underwriters**

In Asia, mainly in Japan, Korea, and Taiwan, companies have expressed strong interest in intellectual property insurance in the past. Given the global market position of these countries in the area of high technology this is not surprising. It is just a question of time before Chinese companies will follow this trend.

While 'litigation only' is an established intellectual property protection product in various Asian countries, the concept of 'revenue or liability protection' is relatively new and, therefore, there is little local expertise and capacity to serve growing market demand.

Asia is a rapidly developing professional indemnity and directors and officers market. Given that only a small number of mainly global specialty underwriters have been underwriting those lines of business, the underwriting discipline and consistency could be maintained over the years. In contrast to general casualty business, specialty lines rates have remained stable with a slow downward trend. With the supply of capacity growing, general casualty business in Asia has become very competitive in the recent years.

Asia's intellectual property protection market offers much growth potential owing to the products' current low penetration levels. (Re)insurers can benefit from identification of the market opportunities in this area.

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