



## Capital Market Innovation Publication by: Swiss Re

### Executive summary

Many insurance industry participants believe that capital markets have the potential to bear some types of insurance risks more efficiently than insurance markets. In recent years, insurers have begun issuing securities linked to bundles of insurance risk, most commonly catastrophe risk. This report explores the prospects for these capital market solutions by first examining the general nature of financial innovation and then assessing current market developments.

### Financial innovation

Financial innovation — the act of developing new products and processes — has been robust in recent decades. One reflection of this activity is the explosive growth of derivatives trading, which has expanded 20-fold since 1986.

Three types of factors drive financial innovation: demand, supply, and taxes and regulation. Demand-driven innovation occurs in response to the desire of companies to protect themselves from market risks such as the fluctuation of exchange rates, interest rates, and energy prices. Supply-side factors that encourage financial innovation include improvements in technology and heightened competition among financial service firms. Other financial innovation occurs as a rational response to taxes and regulation, as firms seek to minimize the costs that these impose. Once the pace of financial innovation began to accelerate in the 1970s, the impetus to innovate assumed a life of its own. Major Banks and insurers set up product development units that serve as engines of innovation.

### Growth of capital market insurance solutions

Following Hurricane Andrew and the Northridge earthquake of the early 1990s, property catastrophe reinsurance was in short supply and premium rates more than doubled. In reaction to this rate spike, some insurers began developing a new class of financial instruments that transfer insurance risk to capital markets. Approximately USD 12.6 billion worth of these capital market insurance solutions have been issued worldwide in the past five years. Nearly two-thirds of these transactions have involved catastrophe bonds, swaps and options. Other transactions include contingent capital and life insurance securitizations. After several years of rapid growth, the pace of issuance slowed in 1999 and 2000.

Capital market insurance solutions offer issuers several advantages, including the potential to reduce counterparty risk and to diversify funding sources. Investors benefit from new opportunities to diversify their portfolios and earn high risk-adjusted returns.

This report reviews ten factors critical to the success of capital market insurance solutions: higher reinsurance prices; liquidity; transparency; resolution of regulatory, accounting, and tax ambiguities; better benchmarks;

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industry education; ratings agency involvement; new investors; financial sector convergence; and specialization. The issuance volume of catastrophe securitizations should grow from its current annual level of USD 1 billion to approximately USD 10 billion by 2010. Over time the set of securitized risks will become more diverse. There is vast market potential for capital market insurance solutions linked to non-catastrophe risks. If these solutions fulfill their potential, the range of risks that are deemed insurable will expand.

## Capital Market Insurance Solutions

A series of major catastrophes can precipitate a shortage of global property catastrophe reinsurance capacity, driving up prices. For example, reinsurance was in very short supply in the wake of Hurricane Andrew and the Northridge earthquake, causing premium rates to more than double between 1991 and 1994. These events set into motion industry efforts to find alternative sources of reinsurance capacity.

Although property catastrophe reinsurance rates have declined from their 1994 levels, the need for catastrophe insurance continues to expand. Growing population densities, increasing wealth, and rising concentrations of property in endangered areas have created a clear long-term trend toward natural catastrophe losses of increasing severity\*. The number of inflation-adjusted billion-dollar natural catastrophes grew from seven in the 1970s to nine in the 1980s and 32 in the 1990s. The reinsurance industry, moreover, regularly experiences capacity constraints for specific catastrophe exposures.

Some of these exposures are of staggering magnitude. Consider :

- ◆ An earthquake of magnitude 8.5 on the New Madrid Fault in the central United States can produce insured losses exceeding USD 115 billion.
- ◆ A Tokyo earthquake of similar likelihood can produce insured losses of USD 40 billion.
- ◆ A Florida hurricane with sustained wind speeds of more than 150 mph can produce insured losses exceeding USD 75 billion.

Because adequate insurance coverage for catastrophe exposures such as these is either prohibitively expensive or unavailable at any price, many catastrophe exposures are only partially insured. Thus, the uninsured losses realized in the wake of one of these catastrophes might be several times larger than the magnitudes listed above. Faced with this sobering reality, industry participants have begun developing capital market insurance solutions to help insure against property catastrophe risks.

The basic logic is compelling. Publicly traded stocks and bonds have a total market value of USD 60 trillion. Imagine that securities investors were to add securities linked to catastrophe risks to their stock and bond portfolios. A USD 250 billion event would represent less than 0.50/o of the global market portfolio. Fluctuations of this magnitude are a normal daily occurrence in securities markets. Capital market insurance solutions also offer advantages for non-catastrophic lines of business, not only for issuers, but also for investors.

### Advantages for issuers

#### Pricing and availability

Large-scale purchasers of reinsurance often find that the coverage they seek is either unavailable or prohibitively expensive. This is because reinsurers limit their exposure to any one risk. Consequently, securitization can sometimes cost less than traditional reinsurance or can offer capacity that is not available on the traditional reinsurance market. Moreover, securitization provides multiyear coverage at a set price. Multiyear pricing insulates the issuer's cost structure from fluctuations in reinsurance prices.

#### Credit risk

Purchasers of reinsurance take counterparty risk into account when choosing their reinsurers. The times when reinsurance matters most are often the times when reinsurers are undergoing financial stress. Insurers therefore diversify their sources of reinsurance and prefer doing business with financially strong reinsurers. As evidence of this preference, reinsurers rated below AA as of 1999 wrote just one-fifth of reinsurance premiums.

Capital market insurance solutions can be structured to minimize credit risk. When catastrophe bonds are issued, the funds collected are invested in investment-grade securities and guaranteed by a highly rated company. The securities are held as collateral in a trust account for the benefit of the reinsured and the investors. A non-US reinsurer usually establishes the trust account as a special purpose vehicle (SPV), which transforms the risk from reinsurance risk into an investment security. Because the SPV holds capital dollar for dollar against all potential claims, the arrangement can offer greater credit quality than conventional reinsurance, albeit at greater cost.

#### Diversifying sources of capacity

Companies seeking to minimize the cost of financing diversify their funding sources. Even if one source of credit is slightly more expensive than another, a company might still access both just to be prepared for changing market conditions. Similarly, even if insurance securitization is now more costly than reinsurance, it may still pay to tap the market. Doing so will allow quick and easy market access should changing conditions make securitization the lowest-cost source of coverage.

### Advantages to investors

### High expected returns

Catastrophe bonds typically pay interest rates close to those for similarly rated esoteric structured paper. These rates tend to be higher than those for corporate debt and traditional asset-backed paper (e.g. MBSs, credit card receivables) carrying the same credit rating. In particular, a representative sample of 17 catastrophe bonds issued from 1997 to 2000 were priced at an average spread of 4.20/a above the risk-free London Interbank Offered Rate (LIBOR), even though their expected losses averaged just 0.60/o. These high spreads compensate investors for: the relative illiquidity of catastrophe bonds; model risk (concern that expected losses are actually higher than estimated); and the non-traditional nature of the securities.

### Portfolio diversification

Empirical analyses show that the occurrence of insurance-related events is un-related with the returns to stocks and bonds. Thus, investing in insurance-linked securities (ILSs) reduces the overall riskiness of an investment portfolio. In recent years, firms have developed a new class of financial instruments that transfer insurance risk to the capital markets. Approximately USD 12.6 billion of these capital market insurance solutions have been issued since 1996.

### Recent innovations

#### Catastrophe bond

Nearly half of insurance securitization transactions to date have involved catastrophe bonds (popularly known as cat bonds). In a typical transaction, an SPV enters into a reinsurance contract with a cedent and simultaneously issues cat bonds to investors. If no loss event occurs, investors receive a return of principal and a stream of coupon payments that compensate them for the use of their funds and their risk exposure. If however, a pre-defined catastrophic event does occur, investors suffer a loss of interest, principal, or both. These funds are transferred to the cedent, in fulfillment of the reinsurance contract.<sup>1</sup>

#### Catastrophe swaps

Another common way to transfer catastrophe risk is through a swap transaction, in which a series of fixed, predefined payments is exchanged for a series of floating payments whose values depend on the occurrence of an insured event. The transaction can be structured as a swap or an option, but the cash flows are the same. The cedent can enter into the swap directly with counterparties or through a financial intermediary. Swaps, by design, offer benefits over catastrophe bonds. They are simpler to implement and entail fewer fixed costs. Unlike cat bonds, they do not tie up capital in an SPV. Swaps do, however, entail credit risk.

#### Industry loss warranties

An industry loss warranty (ILW) resembles a catastrophe swap but is structured as a reinsurance transaction. The risk transfer mechanism is a double trigger that is activated only if insurance industry losses and actual losses incurred by the purchaser of the ILW both exceed prespecified thresholds. Because of the indemnity requirement, the ILW can be treated as reinsurance rather than as a swap. The actual loss layer is set so low relative to the industry loss layer, however, that the actual loss event is very likely to occur should the industry loss event occur. As such, the ILW is priced based on the risk associated with the industry loss layer.

#### Contingent capital

Contingent capital instruments provide the buyer with the right to issue and sell securities at a fixed price for a fixed period of time if a predefined event occurs. These securities may be equity, debt, or some hybrid. For example, an insurance company can purchase the right to issue securities to investors at a pre-negotiated price if catastrophe-related losses exceed a certain threshold. Contingent capital differs from insurance in that it does not provide indemnification. It provides access to capital that either dilutes equity or must be repaid.

#### Exchange-traded options

Although efforts to date to develop exchange-traded catastrophe options such as the PCS options listed on the Chicago Board of Trade have not been successful, exchange-traded instruments may eventually become a widely accepted means of transferring insurance risk to capital markets. PCS exchange-traded catastrophe call options are standardized contracts that provide the purchaser with a cash payment if an index measuring catastrophe losses exceeds a certain level, known as the *strike price*. If the catastrophe index remains below the strike price for the prespecified time period, the options expire worthless and the seller keeps the premium. If, however, the catastrophe loss index exceeds the strike price, the purchaser of the options receives — and the seller provides — cash payment equal to the difference between the catastrophe index and the strike price. An insurer purchasing a catastrophe call option is hedging against the risk that large aggregate market losses, as measured by the index, will exceed the strike price.

Although all these instruments transfer insurance risk to capital markets, some are more suitable than others in particular situations. To illustrate the differences between these instruments, Table 1 highlights the advantages and limitations of capital market insurance solutions vis-a-vis property catastrophe reinsurance, the traditional means of protecting against catastrophe losses. In particular, it compares catastrophe bonds (a debt instrument), PCS options (an exchange-traded instrument), and contingent capital with traditional property catastrophe reinsurance.

## Comparison of capital market instruments with reinsurance:

	Cat bonds / swaps	PCS options	Contingent capital	Property catastrophe reinsurance
<b>Compensation / financing</b>	Compensates buyer against losses, subject to basis risk	Compensates buyer against losses, subject to basis risk	Provides financing on pre-agreed terms in case of loss event. No indemnification	Compensated reinsured against losses
<b>Basis risk</b>	Present in deals with trigger based on index	Significant	Depends on the index /trigger used	Minimal
<b>Credit risk</b>	Minimal. Capital is invested in safe securities held by trustee	Minimal. Obligations guaranteed by the exchange	Minimal. Capital is invested in safe securities held by trustee	Depends on solvency of the reinsurer
<b>Liquidity for risk taker</b>	Currently low. Expected to improve as market develops	Currently low. Expected to improve as market develops	Low	Limited to retrocession market
<b>Well-established underwriting accounting rules?</b>	Yes	No	No	Yes
<b>Well-established accounting rules for investors?</b>	Yes	Yes	No	Yes
<b>Standardization</b>	Customized	Standardized	Customized	Customized
<b>Multiyear pricing</b>	Available	No	Available	Availability depends on market conditions
<b>Transaction costs relative to reinsurance</b>	High, expected to decrease as firms gain experience	Low	High, expected to decrease as firms gain experience	N/A

### Market developments

To date, more than USD 5 billion of property catastrophe risk has been securitized worldwide. The first non-exchange-traded capital market product that insured against catastrophe losses was a USD 85 million cat bond issued in 1994 by Hannover Re. Cat risk securitization achieved an annual volume of USD 1 billion in 1997 and USD 1.4 billion in 1998 (Figure 8). This rapid growth raised the expectation among market participants that capital markets would soon develop into a significant channel for sharing catastrophe risk. Then the growth halted. What happened? A 21% decline in property catastrophe reinsurance prices from 1996 to 1998 made the pricing of securitization deals less attractive by comparison.

Though most securitizations to date have been related to catastrophe events, there have been a few notable life securitization deals as well. Hannover Re transferred its new policy acquisition costs to the capital market in 1998 and has followed with three more offerings. Other companies that have done successful life securitizations include National Provident Institution, American Skandia Life, and Alleanza/Generali. Most of these deals have been motivated by the need for funding as opposed to risk transfer.

Futures and options contracts based on the initial version of the Chicago Board of Trade (CBOT) cat index began trading in December 1992 but there was little activity in the market. Trading in these securities was halted. A second version of the index, compiled by PCS, was introduced in 1995. These securities met with limited success. At its peak, the total capacity created by PCS options was USD 89 million. Trading in these options has slowed to a virtual halt.

In a separate initiative, the Bermuda Commodities Exchange (BCE) was launched in 1997 to trade property catastrophe-linked option contracts. The BCE suspended operations in 1999 due to lack of activity.

These developments suggest two questions: How might capital market insurance solutions evolve in coming years? What will it take for today's spurts of capital market activity to mature into a full-fledged market?

Discussions with industry participants point to ten factors that are critical to the successful development of capital market insurance solutions.

### Ten Success Factors

#### 1. Hard reinsurance market

By far the most important determinant of the success of capital market insurance solutions are whether they can offer issuers competitive pricing. Rising reinsurance rates in the early 1990s stimulated the demand for capital market insurance solutions to substitute for reinsurance. Just as these solutions began to develop in the mid-1990s, however, reinsurance premium rates declined to levels so low that capital market insurance solutions were, by and large, no longer competitively priced.

A hardening of the reinsurance market would help foster greater acceptance of capital market insurance solutions. A major catastrophe or a downturn in securities prices that renders several insurers insolvent could precipitate this. The unavailability of ample, reasonably priced insurance or reinsurance has spurred innovation before, accelerating the growth of captives in the 1970s and the founding of the Bermuda market in the 1980s.

#### 2. Liquidity

Another key attribute of insurance linked securities (ILSs) is their liquidity. If the secondary market for these securities is active,

investors can unwind their positions with a minimum of difficulty and at low cost. The absence of this liquidity makes the securities a less attractive investment vehicle. The need for liquidity is a 'chicken-and-egg' problem: for the pricing on ILSs to improve, more investors must become interested in them. Investors, however, would rather see more deal flow before devoting time and effort to analyzing these securities.

Traditional reinsurance markets are far less liquid than securities markets. An active market for ILSs could make insurance risks substantially more liquid than they are today. Experimentation will include the creation of new contracts on established commodity exchanges and the development of entirely new exchanges dedicated to the efficient exchange of risks among insurers. Both approaches have been tried; each is a reasonable possibility. Just as leading securities firms have found it worthwhile to create new electronic exchanges to facilitate the efficient trading of stocks and bonds, insurers should find value in developing efficient mechanisms for sharing risks.

### **3. Transparency**

A key advantage of capital market insurance solutions is that they permit greater transparency, thereby allowing a larger group of investors to bear a given risk than was previously feasible. This advantage is important because capital market insurance solutions compete with reinsurance, a mature, standardized means of risk transfer that is widely accepted in the marketplace and simple to execute. The reinsurance industry is global, well established, and possesses the expertise needed to underwrite a wide range of risks. For capital market insurance solutions to succeed, the benefits of transparency must outweigh the information advantage and skills that reinsurers possess.

### **4. Resolution of regulatory, accounting and tax ambiguities**

Regulatory, legal, tax, and accounting rules heavily influence whether, and how widely, a financial innovation is adopted. As the rules and regulations governing capital market insurance solutions grow clearer, insurers will become more willing to securitize their risks. One survey found this to be a factor critical to the success of capital market insurance solutions. Because of their newness, however, some capital market reinsurance solutions presently receive less favorable regulatory treatment than reinsurance. As tax and regulatory authorities grow familiar with these instruments, they will be better equipped to establish clear standards and regulations.

### **5. Development of better benchmarks**

An important step on the road to a liquid market for ILSs is the establishment of benchmarks through which industry participants can monitor the progress of a given region or line of business. The existence of well-accepted stock market indices such as the FTSE100 and the Nikkei 225 and benchmark securities like the ten-year Treasury bond greatly facilitates the development of financial derivatives. Analogous benchmarks for the insurance industry are needed to provide a solid foundation for capital market insurance solutions.

### **6. Industry education**

For capital market insurance solutions to win broad acceptance, a critical mass of insurance industry participants must become familiar and comfortable with capital market concepts. This will require an extensive education initiative. Professional leadership by individuals, companies, and industry organizations can help make this happen.

### **7. Credit rating agencies**

Credit rating agencies play a crucial role in the development of capital market insurance solutions. Their ratings of ILS deals offer investors an objective assessment of just how risky the securities are. More important, by distributing information to investors on how they rate these transactions rating agencies play an invaluable educational role.

### **8. Attracting New Investors**

ILSs must attract new investors. These early adopters include firms with institutional knowledge of insurance markets. Some insurers and reinsurers invest in the instruments because they offer a simple way to enter a line of business or region without building costly infrastructure. Individuals who have worked in the insurance industry as underwriters, actuaries, or security analysis have begun opening assets management boutiques investing exclusively in these instruments for clients. Hedge funds that invest in a wide range of assets have also expressed an interest in these securities. Many investors favor hedge funds whose returns are uncorrelated with the bond and stock markets. It is precisely this lack of correlation that is a major selling point of ILSs.

### **9. Financial Sector Convergence**

With ongoing financial market deregulation in Europe, Asia and USA. Financial institutions are looking to enter profitable insurance lines of business. These new competitors will force insurers to embrace change.

Some professional risk managers are beginning to address a wide array of business risks such as interest rates, exchange rates, commodity prices, and even weather.

### **10. Specialization**

## **Prospects**

The exact types of capital market insurance solutions that will win acceptance and their rate of adoption remain uncertain. Despite this ambiguity, the compelling benefits that these solutions offer — reduced credit risk, added risk capacity, and an enhanced ability to shift risks to those best prepared to bear them suggest that convergence of the capital and insurance markets will continue. This section reviews current developments regarding capital market insurance solutions and considers what the future might hold.

## Current developments

Several recent developments have strengthened the market outlook for insurance securitization.

### **Hardening markets**

Interest in insurance securitization has been rekindled in recent months because of ~d rising reinsurance premium rates in most markets in 2000. These increases reflect

Substantial property catastrophe losses in 1999, which was the second-worst year on record. In reaction to these catastrophes, a number of insurers suffering severe losses have withdrawn from the market.

At the end of 1999, the two most severe winter storms in a decade devastated areas of Europe, including France, southern Germany, and Switzerland. Storms *Lothar* and *Martin* caused economic losses of USD 12 billion and USD 6 billion, respectively. Nearly half of these damages were insured; reinsured losses for the two storms were USD 3.8 billion and USD 1.6 billion.<sup>19</sup> In response to these events and the resulting hardening of the reinsurance markets in Europe, several major reinsurers issued cat bonds covering European windstorm risk at the end of 200() and the beginning of 2001.

### **Regulatory, tax, and accounting issues**

Several key issues are under debate by regulatory, accounting, and tax authorities.

#### *Insurance Commissioners*

Commissioners must approve ILS products, currently several states in US and several European countries are approving these alternatives.

#### *Accounting status if derivatives*

Another question that regulators are addressing is how an insurer's purchase of a derivative security to hedge its underwriting risk should be treated for accounting purposes.

#### *Standardization and Education*

Standardization and public leadership are valuable means by which to promote the development of a new market.

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## Trend in Reinsurance Industry in 21<sup>st</sup> Century

### Publications released in Global Reinsurance

The re/insurance industry is at a strategic crossroads. The industry is just emerging from over a decade of relatively low growth and poor profitability. However the danger is that the current, potentially short-term, hardening of the market will prevent many industry players selecting and implementing the strategic decisions that are needed to provide the basis of a sustainable long-term future for the risk transfer business.

Some major non-life re/insurers show signs of 'retreating from risk', and seeking new revenues in life insurance and/or funds management businesses. This research paper analyses the current situation and trends in the industry, and cautions against this strategy. Instead it argues that what is necessary is a more fundamental 'root and branch' review of the industry's structure and operations, as well as the products and services it offers.

#### Reinventing re/insurance for the twenty-first century

##### The Challenge

Most re/insurance companies have delivered low growth and poor profitability over the last 10 to 15 years. To its customers/policyholders, the re/insurance industry has provided products that are becoming less relevant, at a delivery cost that is seen as being too high, and with service satisfaction levels that are hardly satisfactory.

The conventional answers these industry ills are to increase premium rates (to improve profitability), and to seek salvation through 'convergence' with the financial services industry.

Convergence in this context can mean several things. It is generally taken to mean placing some underwriting risk, usually property catastrophe risk, directly into the capital markets – but this so-called insurance-linked securitisation activity, whilst innovative and interesting, is not yet material to the industry as a whole. In fact, there is a greater level of transaction activity at present in placing risks from the capital market, particularly credit-related risks, into the re/insurance industry.

The greater level of convergence or crossover activity between the re/insurance sector and other sectors of financial services is in 'wealth management', rather than risk management.

Wealth management here is taken to cover life & health, savings and asset management products and services. Increasingly the major insurers and reinsurers are diverting resources away from non-life business, particularly on the corporate book, and into either non-life personal business, or more often into life and asset management operations. This strategy is driven by a reducing appetite on behalf of many carriers to accept the volatility inherent in property/casualty business, and to target instead less risky classes of business. This trend has been labeled the 'retreat from risk' by some commentators.

Whilst the re/insurance industry does face significant challenges, this 'retreat from risk' does not serve its longer term strategic interests. Instead the proposal is that the re/insurance industry needs to undertake a more fundamental root and branch review of its structure and operations in order to provide risk transfer products and services that truly meet the needs of its current and future clients.

##### Research Analysis

The non-life re/insurance industry isn't working too well. The general situation was very well summed up in the following extract from a research report issued by Schroder Salomon Smith Barney on 29 May 2001:

*Established wisdom has always held that general insurance is an inherently unprofitable business because too much capital, fuelled by the longest bull market in history, is chasing too little premium. In a market with few barriers to entry and with existing operators wedded to the business from cradle to grave, competition and capital (both directly supplied and offered indirectly through cheap reinsurance) are always in abundance. Insurers offer an undifferentiated product where costs are unknown to the supplier at the point of sale and can often be inflated subsequently by the governments and the judiciary. Buyers are driven by price, with service quality hard to assess at the outset. Switching costs are negligible so that the costs of business acquisition often cannot be recouped. In such as a business mode, it is hardly surprising that profits have been under pressure.*

The financial performance of the re/insurance industry has been terrible in recent years; the rating agency Fitch continues to maintain a Negative Rating Outlook for the industry.

Standard & Poor's in its commentary (May 28, 2002) described reinsurance industry "A brief period of catastrophe-induced price hikes is not going to turn around an industry that for several years indulged in lax underwriting then took the brunt of terrorism losses. Not only are there past sins to reckon with, but a ballooning trend of new losses emerging from professional-liability business lines. For these reasons, the outlook on the industry remains negative.

**From a shareholder perspective:**

Shareholders are attracted by growth and profits. Unfortunately non-life insurance is a no- or low-growth industry; gross non-life premium volumes declined 0.1 percent in real terms in 1998 and grew by only 1.2 percent in 1999 (source: Swiss Re *sigma*). Also the owners of re/insurance companies have not received appropriate risk-adjusted returns on capital, as the following table of comparative returns on equity for the five years 1994-1998 (source: Best's Review, January 2000) illustrates:

Return on Equity	Minimum	Average	Maximum	Range
Property / casualty insurance	5	14	23	18
Diversified financial	15	18	20	5
Commercial banks	16	16	17	1
Fortune 500	13	14	14	1

The property/casualty industry seems in fact to display inverted risk-return performance characteristics, by yielding below average returns for above average risk. Re/insurance companies do face conflicting pressures on the level of capital they should have on the balance sheet. Policyholders, insurance regulators, credit rating agencies all, in principle, want a re/insurer to have as much capital as possible for greatest security; shareholders want a re/insurer to have as little capital as possible for greatest return on capital.

Research on capital adequacy and risk-adjusted profitability of the various segments within the US property/casualty industry reported by RMS and ERisk (Press release, 18 April 2001) indicates that the average risk-adjusted return on capital (RAROC) is low at 10 percent, and is skewed in favor of non-catastrophic lines of business.

There are three basic approaches to correcting such risk-adjusted return on capital performance: (a) reduce risk, (b) increase returns, and/or (c) reduce capital.

### **Solution approach (a) - reduce risk**

The losses incurred by re/insurers are increasing, both from individual and from the overall accumulation of losses.

The financial stability of the re/insurance industry however is not only threatened by current and future loss patterns, but also old losses. This could be labeled the "Old premium, new losses" phenomenon. Despite not having been in commercial use for several decades, asbestos-related claims are still increasing in quantity and quantum. Latest estimates, by Tillinghast Towers-Perrin and AM Best, both put the total cost of asbestos losses at around \$200 billion, with the insurance industry paying around \$125 billion; about half of which is not yet reserved. Add to this the ongoing litigation of tobacco-related losses, and the potential for significant liability settlements for mobile phones, deep vein thrombosis, stress in the workplace, lead-based paints, mold damage, aided and abetted by the growing 'compensation culture' and lawyers working on a contingent fee basis.

Another phenomenon is the growing shorter-tail risks, which pose significant loss potential, the 'new risks, new premium?' phenomenon. Much of today's world of risk did not exist 10 years ago risks such as business interruption, digital risk, brand & reputational risk, either did not exist or their potential to cause significant economic losses was not appreciated.

Not surprisingly, many major re/insurers have been evaluating their strategy and positioning in the non-life market. "The world's non-life insurers have adopted a strategy of diversification for the next five years. Over 50 percent expect to be broad-based financial service players by 2005, up from 22 percent today" (EIU report 'Property & Casualty: Mapping the future'). This diversification strategy is taking various forms, and can be characterized as a 'retreat from risk'. Some re/insurers have withdrawn from particular classes of business, or disposed of complete operations, that were perceived to have low profitability and/or, perhaps more significantly, high volatility. Other carriers are seeking to grow their life & health and third-party asset management businesses, at the expense of their non-life operations. Life & health is seen as a business with higher growth prospects, and lower volatility.

A clear example of this strategy is exemplified by CGNU it has withdrawn from the global risks market, sold its Lloyd's operations to Berkshire Hathaway and its US non-life business to White Mountains, both with big write-offs. It has sold other non-life operations around the world, whilst also investing in life and Bancassurance businesses in Europe and elsewhere.

Another example is ACE, which started off in Bermuda as an excess casualty operation, then bought Tempest Re, and then paid \$3.45 billion for the international and US property casualty business of Cigna. The current balance of ACE International's book of net written premiums is two-thirds property/casualty and one-third accident and health; ACE is now looking to shift this to one-third property/casualty, one-third accident and health, and one third personal lines.

One counter-example is RSA, which has been focusing on developing its non-life business, and selling off, its life business. "The life business can absorb an awful lot of capital and does not achieve good results."

The other business that the major re/insurers have been moving into is third-party asset management. But the funds management business is very competitive, with low margins and a need for very large scale to achieve the necessary efficiencies. Not all the ventures of major re/insurers into asset management have been as successful as expected.

### **Solution approach (b) - increase returns**

The simplest responses to low profitability are, wherever possible, to increase underwriting profits and to lower operating expenses. As the financial results reported above showed, the re/insurance industry has been through an extended period of soft market conditions, but the insurance and reinsurance markets have been hardening significantly since late 2000, in most classes of business. The fact that multi-year programs have become very hard to secure suggests that further price increases are anticipated by the supply-side of the market. However the mere act of increasing premium rates does not necessarily translate into increased written premiums and returns. In fact a hardening market tends to drive the better quality business out of the traditional market, with clients taking higher retentions and making greater use of alternative risk transfer and captives.

Several reports by consultants into the insurance industry have highlighted the need and opportunity to cut operating costs. For instance, McKinsey estimated the total frictional costs of the worldwide non-life insurance industry at around \$140 billion. One way of reducing fixed costs is through mergers & acquisition consolidation activity – but despite the high level of insurance M&A activity in

recent years, Moody's reported that consolidation has had much less impact than expected on costs, or as seen in other sectors such as banking.

Another way of cutting costs is the greater adoption of information technology. The primary role for IT has been seen by many as lying in distribution, replacing some of the functions of a broker. However, such disintermediation has made little progress in non-life business, except in personal lines classes. The greater contribution from IT probably lies in delivering efficiency on the administrative side of the business, particularly in the international subscription market that is London. Very few of the many attempts over past years to simplify and/or automate the processes of moving paper and money around the market have yet achieved significant success.

### **Solution approaches (c) - reduce capital**

If a re/insurer has more capital than is necessary to write the level of apparently profitable premium available, than financial theory suggests that any excess capital should be returned to shareholders. If this is not done, then the return on capital will be diluted. However there are few examples of re/insurance companies doing this; more often excess capital has been used to expand market share (not always profitably) or diversify through acquisitions (again sometimes with somewhat dubious rewards), or just keep on the balance sheet for 'a rainy day'. One explanation for such contrary behaviour is the 'agency problem', where managers' motivations may not always be aligned with the owners interests.

What is required is a more flexible form of capital structure for re/insurers. This was one of the strengths of the traditional Lloyd's one-year syndicate model, where capital was essentially raised afresh each year - and so the target capital level could be increased/reduced each year as was appropriate to the prevailing market conditions. If premium rates were high, then more capital could be sought; if rates were low, with less profitable business around, then the capital raised could be lowered. This flexible capital base was combined with a low fixed, high variable business cost base.

Re/insurers need to enhance their capital management skills, by making greater use of instruments such as hybrid capital and/or contingent capital. Such forms of capital have a cost nearer to debt (and hence are cheaper than equity), but can perform as quasi equity. The few issues to date of contingent and hybrid capital have been given good reviews by the credit rating agencies.

The conventional wisdom is that credit rating agencies require re/insurers to have as much equity capital or surplus as possible. However this is not true; Standard & Poor's have gone on the record as inviting reinsurers to consider accepting a downward revision of their credit ratings as a means of improving their overall financial performance. The number of companies with triple A ratings in the sector was "absolutely incredible" when it was considered that the average corporate ratings were closer to triple B. S&P predicted a "slow revolution" in the reinsurance sector's approach to credit ratings, which would require the adoption by reinsurers of increasing detailed capital allocation models and the restructuring of their businesses into new subsidiaries and other legal entities.

One of the anomalies between the insurance industry and the other financial services sectors, is that triple A re/insurers receive no extra payment, despite their greater security as a counterparty, than any other carrier on the same subscription policy, even if that carrier is only double or even single A. Therefore there is no explicit return on the extra capital needed to maintain a triple A rating; therefore unless a triple A rating is strictly necessary, it is a sign of capital inefficiency.

**From the policyholder perspective:** it appears that corporate policyholders hold the traditional insurance product and service in low regard, as evidenced over the past decade by the low world-wide growth of non-life premiums, increase in number of captive formations and premium volumes written by captives, and growth of self-insurance techniques – all during the longest softest insurance market cycle. Other issues include the worsening reputation of the industry in settling claims – increasingly re/insurers appear to be hiding behind their lawyers on any difficult claims, where the industry mantra seems to be "sue first, pay later (maybe)".

Aon has been conducting a biennial Risk Management and Risk Financing survey of the leading UK corporations for some while. Over the years the risks that most concern the corporations have increasingly become 'business' risks, rather than the traditional 'insurance' risks, such as fire and employers' liability (which head the list in 1995). In the 2001 survey, the top two risks were 'loss of reputation' and 'failure to change', followed by 'business interruption'. When asked in what risk areas was the purchase of adequate insurance cover a problem, the answers were "loss of reputation/brands", "business interruption", "product liability", "computer crime" and "environmental".

### **Solution approach (d) - new products**

Overall the insurance market is failing to keep up with the needs of its corporate clients; the percentage of respondents saying that the insurance market was generally meeting business needs fell from 82 % in 1999 to 71% in 2001. Typical comments made by respondents included: "no real cover for many key business risks", "slow to adapt", "lack of genuine flexibility", "multiyear/multiline is a great idea but difficult to get", "poor service" and "limitations in policy wordings".

The significant need for new risk management and financing solutions for the emerging major areas of risks facing corporations was also confirmed by a research report by MacTavish. The key findings included:-

- (a) Corporations are exposed to a considerable amount of risk that they are not covering, but would like to.
- (b) The same corporations acknowledged that risk management is not a core competence for them.
- (c) So far, suppliers have failed to capture this opportunity.
- (d) Innovative product creation and design is required for success.

Historically, insurance has been largely about covering risks to assets, rather than risks to earnings. The major threat to a corporation's share price is missing its earnings forecasts.

Therefore any risk that can threaten earnings becomes a 'killer' risk, and as shown above the offerings and appetite of the traditional insurers and reinsurers have increasingly been shown wanting.

These findings confirmed by EIU Research Report (2001) on Enterprise risk management, key findings: "Non-traditional risks pose the greatest threat. Executives reported that their most significant risks aren't those traditionally managed by risk management or treasury departments. The top three are customer loyalty, competitive threats and operational failure.

These are also among the risks companies believe they manage least well."

## Summary of Results and Recommendations

**Reduce frictional costs:** The frictional costs embedded in the existing structure and operations of the re/insurance industry do need to be radically reduced. This can be achieved by a combination of process re-engineering and wholesale adoption of IT for all processing.

However, this only presents a necessary, but not sufficient condition for future success.

**Convergence is not the answer:** Convergence between the re/insurance industry and other sectors of the financial services industry does not provide a sustainable long-term future for the existing re/insurance companies. This strategic option of 'bancassurance' has not yet delivered the expected returns for most companies that have tried it.

Likewise, the 'retreat from risk' strategy may lower volatility of financial performance, but will also result in levels of performance below the expectations of current shareholders. The level of competition and scale of operation required to succeed in banking sectors, such as funds management, is beyond most existing re/insurance companies.

**Disaggregation is the answer:** success lies in fully exploiting and responding to the existing and future needs of corporate insurance policyholders for risk transfer. Their shareholders in turn want to transfer volatility, and so there is a sustainable demand for the right risk transfer product, delivered at the right cost - but to achieve this will require a radical restructuring of the current re/insurance industry.

Here there is a lesson to be learnt from the current restructuring going on in the life insurance industry. In the new industrial model, each company will specialize in just one or two stages in the value-chain -e. g. manufacturing (i.e. product design), distribution, or asset management.

The reason for this approach is that only very few companies can achieve sustainable success as a generalist across all stages of the value chain. Unless the stages in the value chain are more clearly separated, then one outcome is usually cross-subsidisation across stages and acceptance of mediocre performance across the board, rather than expectation of excellence in each stage. Also if an insurance company more clearly separates the manufacturing and distribution processes, then research and manufacturing can more efficiently be done centrally, and "products" then customised and marketed locally. Another consequence of disaggregation is that companies from outside the traditional industry can enter and compete successfully in one stage if they have particular skills, such as in distribution (e.g. retailers, supermarkets or other companies with customer contact such as Virgin). Size, i.e. scale, is a necessary condition for achieving acceptable margins in each stage of the chain. Investment in IT is the main way to achieve scalability. However size is not necessarily a sufficient condition for success by itself - focus or specialisation is also required to achieve success in each part of the value chain that any company participates in.

The lesson for the non-life industry is to achieve the necessary focus, specialisation and scale by disaggregating the range of functions performed by the typical re/insurer. The functions within the corporate non-life industry should be segregated into product design, distribution, servicing and risk bearing. The role of product design will be carried out by organisations that probably currently operate within the brokerage sector; distribution and servicing by brokers and insurers; risk-bearing predominately by organisations currently recognised as reinsurers. There will be increasingly less value-added (or capital efficiency) by insurance companies having to have a balance sheet capable of retaining significant risk; nor little value-added for reinsurance companies to build distribution and service networks. Focus on specialisation and scale will reduce frictional costs and increase service levels.

... **combined with integrated capital management for re/insurance companies:** the re/insurance companies that remain in the industry as risk-bearers face various categories of risk, not just catastrophe losses:-....

- ◆ Liability or hazard risk
  - Rating risk – losses are greater than expected
  - Coverage risk – scope of risk is greater than expected
- ◆ Asset or financial risk
  - Capital market risk – adverse movements in value of investments or exchange rates, fall in liquidity of assets
  - Credit risk – on premiums receivable and reinsurances recoverable
  - Reinsurance risk – programme does not perform as expected.
- ◆ Business risk
  - Operational risk – due to failures of systems, processes and/or people
  - Regulatory risk – actions by regulators, tax authorities, courts, credit rating agencies
  - Strategic risk – impact on pricing and customers of actions by competitors, or changing economic, political and industry trends

## Essential Features To Respect In Formulating All-Risks Covers

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The key difference between All-Risks wordings and conventional covers lies in the type and method of describing the insurance cover and the resulting reversal of the onus of proof. Whereas with named perils the policyholder is required to prove that an insured loss has occurred, a loss under All-Risks covers can only be declined if the insurer can prove that its exclusion is specified in the contract. That is why an insurer must define the desired, and in particular, undesired scope of cover in a legally fail-safe manner. This is fairly difficult given that the terms and conditions are often derived from imported Anglo-American coverage concepts which are tailored to the legal situation prevailing in the markets where they were spawned and which may entail unexpected and surprising consequences in other countries.

#### Insurance Clause

Insurance cover is defined by the Insurance Clause (IC). It is important to word and assess the IC correctly since it regulates the object of insurance and has a substantial influence on the way the successive contractual elements are formulated. It is necessary to conduct a comprehensive risk analysis and to identify the policyholder's insurance requirements. Determining the perils of the policyholder's current risk profile is not enough; future extensions of the policyholder's field of operation, takeovers and mergers must be allowed for as well. The way this problem is dealt with from an underwriting point of view is crucial, however. The following wording, without a New Acquisitions Clause that obliges the policyholder to report new risks, would provide the policyholder with automatic and unlimited coverage for its newly acquired companies:

*"The Insured" and all affiliated, associated and subsidiary companies or corporations, joint ventures, partnerships or individuals, and/or any other party in interest that is required by contract to be named, now or existing or hereafter constituted or acquired.*

The following three examples shall serve to illustrate the effects of different IC wordings:

#### Example 1

The insurer shall indemnify insured property which is suddenly and unforeseeably destroyed or damaged or lost as a result of burglary, robbery, looting or in connection with property damage or resulting business interruption.

Unforeseeable damage is damage that was not foreseen in time by the policyholder or his representatives and that could not have been foreseen with the specialist knowledge needed to perform the operational activities, gross negligence being excluded herefrom.

Destruction or damage is deemed an adverse change in the property's substance. Destruction or damage does not include the manifestation of an intrinsic defect. Non-essential changes that do not impair the property's utility value shall not be deemed property damage under this insurance.

The above IC wording can be defined as ideal-typical from the insurer's point of view, since it contains all the essential components. It requires property damage, which distinguishes it from bodily injury and financial losses. The term unforeseeable and the description immediately ensuing excludes any damage that could have been foreseen by the policyholder or his representative. In this context it is important for the underwriter to analyse the representatives' clause, since it is often restricted to the company's management, with the result that only damage foreseeable by the management is deemed excluded. Moreover, it defines precisely what is meant by the terms destruction, damage and loss. The term sudden, according to prevalent court rulings, does not have any significance in and of itself but is deemed helpful in construing the term unforeseeable.

#### Example 2

The insurer shall indemnify insured property which is destroyed or damaged or lost as well as any business interruption resulting from such destruction or damage or loss.

#### Example 3

The insurer shall indemnify insured property and financial interest which are destroyed or damaged or lost as well as any business interruption resulting from such destruction or damage or loss.

Striking in these two examples is the fact that, although property damage is a prerequisite for indemnification, foreseeable damage is included in coverage because the word unforeseeable is missing. If

coverage includes engineering risks, such as the policyholder's machinery and equipment, failure to require an occurrence to be unforeseeable to the policyholder or his representatives aggravates the risk. This is especially true when the policyholder's representatives include the works or plant managers, since, owing to the nature of their activity, they should have the specialist knowledge needed to identify foreseeable damage in time and to take the necessary precautions.

If the wording fails to specify exactly what constitutes property damage and does not distinguish it from insignificant changes in the object designed for use, coverage extends to scratches, dents and the much-discussed graffiti damage. Commensurate deductibles can mitigate the effects of such an omission.

If a definition of the terms destruction and damage is missing, then possibly all alterations of property are regarded as such, even damage resulting from an intrinsic defect. The consequences this may have are illustrated in the following example.

A policyholder's machine is defective. It is repaired provisionally and put into operation again. Since the repair work is only temporary, the machine suffers a total loss shortly afterwards. The damage in examples 2 and 3 is indemnified, whereas in example 1 the insurer is exempt from the duty to indemnify, as inherent defects in the machinery are deemed excluded.

If the term loss is not specified any further, as is the case in examples 2 and 3, any unclarified loss or deterioration, petty theft or loss of inventory is included in coverage. Even if such damage is excluded in the clauses, the situation is not the same. The reason lies in the reversal of the onus of proof mentioned earlier on. Whilst in the first example it is up to the customer to prove that a burglary has occurred, it is the

insurer in examples 2 and 3 who has the far more difficult task of proving that the loss was in fact attributable to petty theft, for example.

The third example is a special variant because it includes pure financial interests. The term financial interest can be construed in many different ways and it is far from being a legally fail-safe expression since it is not followed by any further specification. If, for example, a company's trade secrets regarding its production methods are stolen and if, as a result, the company's competitive position deteriorates because its profits drop sharply in the ensuing period, the loss in profits is covered by the policy since the company's financial

interest has been affected. Besides, this wording does not entirely exclude liability claims, no matter what their nature may be, since these may be construed as a financial interest also. The term might even denote third-party interests - it is therefore virtually impossible to determine the appropriate limit of liability.

### Exclusions In All-Risks Covers

Exclusions are a significant part of All-Risks insurance. The true scope of cover does not become clear until one has checked the list of excluded perils (risk exclusions), losses and property (property exclusions). There is no standard market exclusion clause. The wording depends on the type of operation and desired extent of cover, on the precise definition of the insured location, the Insurance Clause and the amount of deductible and limits of liability involved.

Listed below are the main standard exclusions used in common property All-Risks wordings.

#### Risk exclusions

- War, warlike events, civil war, revolution, rebellion, insurrection, riots, invasion. Warlike events are violent conflicts between two or more countries or between at least two large population groups in one country (civil war). It is necessary to compile such a detailed list of possible warlike events so that they can be distinguished from insurable forms of civil unrest. Civil unrest is a term used to describe significant numbers of the population engaging in disturbances of the peace and public order and committing acts of violence against other persons and property.
- Terrorism. The tragic events of 11 September 2001 have shown that this type of risk is extremely difficult to insure. The terror risk, similar to war, is almost impossible to evaluate and calculate.
- Orders of public authorities. This term denotes any restriction or repeal by the state (public authority) of an owner's right to freely dispose of his property.
- Intent and gross negligence on the part of the policyholder and his/her representatives. Negligence is an issue involving the insured event's foreseeability and thus avoidability. It is therefore uninsurable.
- Nuclear energy. Given the possibility of loss accumulation, this exclusion is obligatory. In the case of nuclear energy losses, however, it should be determined whether the inclusion of radioactive isotopes in a relevant clause would not actually be recommendable. In Germany, for example, the indemnification of nuclear energy losses is governed by the Atomic Energy Act according to which the operators of nuclear power plants are obliged to provide coverage and take out liability insurance for such risks.
- Storm tide. The exclusion of these losses is obligatory because of the possibility of loss accumulation.
- Unclassified losses or deterioration as a result of petty theft, fraud and embezzlement, loss of inventory. This exclusion is imperative unless the term loss is defined in the IC1. In any case this exclusion is recommendable for reasons of legal certainty.
- Cracking, expansion or subsidence of buildings and objects pertaining to the buildings.
- Genetic modifications and manipulations.
- Losses as a result of outages of power supplied by third parties.

Certain recent wordings have begun to depart from the principle according to which suppliers' risks under business interruption insurance were indemnified only if the supplier's operations had suffered a loss caused by an insured peril. By covering any and all kinds of power outage, regardless of their cause, the risk becomes uncontrollable.

The following exclusions will be used to exclude elements which are also excluded by marine insurers:

- Damage to inventories due to processing or finishing, inner decay or the inherent nature of the goods.
- Normal atmospheric humidity or ordinary fluctuations in temperature or normal weathering influences which must be expected given the seasonal and local circumstances. Goods may perish if, for example, a ship passes through different geographic zones that are subject to fluctuations in temperature.
- Damage attributable to inadequate packaging or inexpert loading methods, unless they are caused neither intentionally nor by gross negligence on the part of the policyholder.
- Damage stemming from customary differences or losses in quantity, measurement and weight.

The particular features of machinery breakdown in property All-Risks covers are dealt with in the chapter Engineering Insurance. We shall cover the relevant exclusions here, however, unless they were already mentioned in the above list of standard exclusions.

Standard exclusions in the engineering classes, in particular in machinery breakdown insurance:

- Normal or premature wear and tear stemming from routine operation. When in operation, machinery is subject to natural, sometimes premature wear and tear. An entrepreneur allows for this fact in depreciation items that he shifts to the customer by way of the sales price he charges for the products manufactured with the machinery. A need for insurance that might come under an All-Risks cover is thus precluded. Such risks would not be indemnified anyway, since the "damage", which does not really exist, was not unforeseeable.
- Corrosion or erosion and cavitation. This exclusion refers to breakage as a result of corrosion. To prevent customers from being disadvantaged over policyholders with conventional coverage, it is recommendable to re-include the exclusion under water damage insurance, as it provides coverage against the corrosion of water pipes.
- Deposits and development of boiler scale, mud or other deposits. The purpose of this exclusion is to encourage the operators of plants in which deposits regularly accumulate to duly run, maintain and service their machinery.

- Damage for which a supplier (manufacturer or vendor) is liable. By virtue of this exclusion an insurer avoids having to indemnify damage stemming from a defect inherent in the goods supplied or manufactured.

#### Property exclusions

If the insurer wishes to keep environmental liability elements out of his wording, he must exclude ground, soil and water from the property insured, whereas a limited first-party losses clause may be included by using a decontamination clause. Facilities involved in the nuclear fuel cycle and off-shore facilities should be excluded as well, since they are the object of special forms of cover and require special underwriting.

Underwriters must realise that All-Risks policies also cover motor own damage/hull business unless water and aircraft as well as land vehicles are excluded. If these are meant to be the object of cover, underwriters must make allowance for this fact in their premium calculations and choice of deductible.

With certain insured objects, insurance cover is limited to specific perils, eg FLEXA (fire, lightning, explosion or impact or crash of aircraft or its parts or cargo), EC (extended coverage) and EEC (extended coverage for natural hazards). This applies above all to living animals and plants, micro-organisms, landfills and property in the process of erection or construction. This too is a way to control the coverage provided under All-Risks wordings.

Of particular importance is the insurance of data, as the loss of essential data may have fatal consequences for a company and may prolong a business interruption substantially. If data is defined as insured property, it is imperative to restrict the destruction, damage, alteration or loss of data to those instances in which the data medium containing the stored data sustains a property loss which is indemnifiable on its merits.

If full machinery breakdown coverage is provided, it is imperative to exclude losses involving auxiliary material and supplies, tools of all kinds, such as borers and milling machines, or other parts which, as experience has shown, need to be replaced frequently during the life of the property insured, eg burner nozzles in furnaces, moulds, dies and batteries. During production they are subject to attrition or increased

wear and tear and are uninsurable, since the interested party finances their deterioration by writing them off or by allowing for the cost in the product's price.

#### Country-specific exclusions

The definition of the insured location and of the country-specific exclusions also plays a pivotal role in All-Risks wordings. They include the following examples:

- In Belgium and the Netherlands damage arising from floods following dyke breaches, flooded dykes, etc.
- In Belgium losses stemming from claims that would result from the legal obligation to cover salvage costs.
- In France losses arising from claims coming under the scope of the Catastrophes Naturelles regulation.
- In Great Britain damage as a result of fire or explosion caused by terrorist acts.
- In Northern Ireland damage arising from terrorist acts or civil unrest.
- In Spain damage covered by the Consorcio de Compensación de Seguros.
- In Switzerland claims resulting from the decree on natural disasters insurance dated 18 November 1992 or the relevant amendments.
- In South Africa and Namibia damage coming under the scope of the South African Special Risks Insurance Association (SASRIA) or the Namibian Special Risks Insurance Association (NASRIA).
- In the Independent States (Homelands) and in Namibia damage arising from politically motivated assaults in accordance with the local definition of the term political riot.

#### Wording of exclusions

Precisely worded exclusions are of utmost importance. Exclusions stating: "The policy shall not cover damage arising from ... regardless of contributory causes" have a more far-reaching effect than exclusions worded as follows, for example: "Excluded is damage to an individual object immediately caused by..." The first wording excludes direct and indirect damage from the causes mentioned thereafter as well as consequential damage. The second exclusion is limited to immediate damage to an individual object, meaning that consequential damage to other objects is included.

#### Example:

A reservoir is destroyed as a result of a war event. The ensuing flood gives rise to a short-circuit which causes a fire at the insured location.

By formulating the exclusion in the following manner: "The policy shall not cover damage arising from warlike events ... regardless of contributory causes", war in the above example is the contributory cause, a causal relationship being given between the war and the fire (consequential loss). The fire at the insured location would thus not be covered under the policy.

Most All-Risks wordings contain "qualified" exclusions. This type of wording is used to exempt damage normally insured as a named peril from the exclusions. An example: "The policy shall not cover damage arising from ... regardless of contributory causes unless the damage arises from the perils specified in item..."

Besides these qualified exclusions there are also "qualified" reinclusions.

The following shall serve as an example: "The exclusions in items ... to ... do not apply to property listed in the positions buildings and equipment."

The consequential losses covered or expressly excluded by the terms and conditions should be analysed carefully, since consequential losses may have more far-reaching consequences than the property damage itself. For the purposes of legal certainty, a lucid and unequivocal wording should be striven for.

#### Interaction Of The Policy's Components

Each of the policy's components mentioned should not be looked at separately but rather assessed in terms of its overall effects on a concrete risk. The underwriter must determine whether the exclusions are not reversed by re-inclusions somewhere else in the policy.

Furthermore it is essential to take into account that All-Risks covers are not always the right solution for every customer. Each component of a cover has its price. Policyholders wishing to save on premium should consider which cover they actually need. It is often more sensible to compose a cover from modules, in particular since the scope of a named perils policy may, in certain cases, even exceed that of an All-Risks cover.

From our standpoint clearly worded multi-risk products, where the individual classes retain their independence, are the best and legally safest solution of a modern concept of coverage, since the many exclusions and re-inclusions under All-Risks covers make it hard to determine how broad a policy's scope of cover actually is. The premiums charged are usually provided as overall or package premiums and they are no longer broken down into the classes integrated in the policy. We also observe a trend toward using the policyholder's revenue as a basis for property premiums. This may pose problems to the property insurer, since there is rarely any correlation between the policyholder's revenue and the limit of liability for property. Investigations into this issue have not yet been conducted.

Property insurance is departing from the full-value principle and shifting to first-loss coverage. We think that the specialists in the integrated classes involved should determine the risk premium they require separately and then apply these technical rates. A slight discount can still be granted afterwards for any reductions in administrative expenses. However, this requires that the multiple perils product can be managed by a portfolio management system. A policyholder's expectations as to the amount of such discounts are frequently not fully justified from a technical point of view. The failure or success of the products heavily depends on this point.