Cat risk comes out of hiding

Modelling limitations and the dearth of historical data means risk managers are ill-equipped to prepare portfolios against the threat of casualty catastrophes, writes **Nick Frankland.**

Nick Frankland is chief executive officer, European operations, Guy Carpenter

Few casualty risks are one-dimensional — they tend to be linked, reflecting the interconnected nature of today's business relationships. Liability risk can follow the links among businesses as well, giving regional exposures worldwide reach. One event could impact a large number of insureds representing many lines of business in several countries. A rise in the number of claims as the casualty contagion spreads has the potential to deplete balance sheets and possibly threaten a carrier's solvency. However, advances in casualty catastrophe modelling technologies may help to protect your portfolio from 'hidden' exposures.

Because there is no trail of physical mayhem, the destructive power of casualty catastrophes tends to be overlooked. Although lives may not be lost, nor homes toppled, the economic implications of a casualty catastrophe are at least as profound as those of the property variety.

Vast amounts of wealth were destroyed, for example, with the collapse of the sub-prime mortgage market, the implosion of Enron and the dotcom economy's unceremonious end. Casualty catastrophes can be severe, and they are starting to occur more frequently. Yet carriers have been ill-equipped to steel their portfolios against this threat, as they are hampered by modelling limitations and the paucity of sufficient historical data.

Casualty catastrophes are difficult to identify, let alone anticipate. A carrier would have to identify every casualty risk in a portfolio and trace its implications through seemingly innumerable trading relationships. Even if this approach were feasible, the likelihood of human error cannot be ignored. At a minimum, an event's effect (and corresponding claims implication) could be missed. More probable, though, is that entire scenarios would go unnoticed. The web of commerce in which every company participates — resulting in the convergence of supply chains, partnerships and customer transactions — makes granular risk identification and the mapping of implications prohibitively complicated.

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Too many variables

Risk mitigation and enterprise risk management is extremely challenging under these circumstances. There are too many variables to monitor, leaving risk managers to focus on specific lines of business, rather than allowing them to take an integrated approach — especially along a difficult to anticipate causal chain. Transferring the risks associated with a root cause does not account for the risks from the effects. To protect a portfolio from the full effects of casualty catastrophe risk, (re)insurers must identify risks, accumulate them into an entirety and model the whole, rather than only the constituent parts. While this has not been possible in the past, a new generation of tools has been developed to track the wide implications of casualty perils throughout a carrier's portfolio.

For example, Guy Carpenter's new Casualty Cat solution tracks the many casualty risks — primary and derived — through a portfolio, identifying accumulated exposures that a carrier might not notice otherwise. This risk management platform enables the study of single- and multi-peril casualty catastrophe risks, measuring risk and impact by proximity to a catastrophe's root cause. Using the proliferation of an event's implications across industries and lines of business, Casualty Cat develops a risk accumulation profile, highlighting a portfolio's exposures and indicating where risk mitigation planning should begin.

Carriers can use this information to construct comprehensive risk management plans that include not only specific casualty risks but the aggregate threat posed by the full reach of exposures. Through a rigorous analysis of inter-industry trading and supply chain data, carriers can assess key vulnerabilities, resulting in a solid foundation for risk transfer planning and execution.

The key to successful casualty catastrophe risk management is to uncover the relationships that can put a carrier at risk. This could mean, for example, tracing an insured company's exposure through the investment bankers, independent auditors and consulting firms that it engages. A plaintiff attorney is likely to target them in a class action lawsuit, so an insurer should be prepared for claims to be filed.

Casualty risk management is changing. Historically, carriers have been able to pool insurers exposed to similar threats and use the 'law of large numbers' to anticipate losses and make portfolio decisions. This approach is not sufficient for today's entangled relationships and resultant casualty catastrophe risks. Every company — and, as a result, every casualty insurance policy — is part of a broad network that carries risk just as easily as it supports daily trading operations. Substantial risks may be lurking in your portfolio. They are not unmanageable, just unknown, so you must identify their hiding places. Advances in casualty catastrophe modelling can help you protect your capital.