

Securitization is influencing your business environment. Whether evaluating your risk transfer options, or meeting with your rating agencies, the changes that securitization has brought to the insurance industry will impact your company

Why securitization matters

"Securitization" of insurance risk is simply turning an insurance policy or reinsurance contract into a security. Insurance-linked securities (often in the form of catastrophe bonds) look like an insurance contract to the issuing company and a security to the investor. Traditionally, raising capital to finance the transfer of risk was restricted to the arena of insurers and reinsurers. More recently, however, investors have established themselves as an increasingly viable and accessible source of alternative or additional capital for the insurance industry.

An investment banker once said, "If it can be priced and rated, it can be sold." In fact, the catastrophe modeling technologies of AIR have been instrumental in providing the scientific foundation and practical application through which insurance-linked securities are priced. This same technology is an integral aspect of supporting the rating process too. As a result, the securities have sold well, just as the investment banker had predicted, successfully establishing a new market for facilitating the transfer of insurance risk. In fact, over \$2 billion of risk capital has been raised through this process over the last three years.

The initial barriers to establishing a market for insurance-linked securities included the capital markets' lack of knowledge of the nature of catastrophe risks and credibility of their measurement. AIR was the first company to bring

"The investment that rating agencies continue to make in order to more fully understand catastrophe modeling will eventually flow through to the general rating of insurance and reinsurance company debt and equities,"
David Lalonde,
Senior Vice President, AIR

their modeling technology to investors and rating agencies and continues to be instrumental in reducing these barriers. In fact, the catastrophe loss estimates that have supported most of these transactions to date are based on technologies developed by AIR. The investment community has come far over a short period of time. Ever since the first transaction investors and rating agencies have demonstrated a real appetite for knowledge and understanding of this asset class.

"The investment that rating agencies continue to make in order to more fully understand catastrophe modeling will eventually flow through to the general rating of insurance and reinsurance company debt and equities," said David Lalonde, Senior Vice President of AIR. "Insurance companies should expect more detailed questions from all rating agencies regarding their catastrophe exposures and reinsurance programs in the future." he said. This makes the securitization process tremendously important to virtually all insurers, even if they never issue or invest in an insurance-linked security. Firms like AIR are building a very important bridge between insurers and the rating agencies.

One aspect of building that bridge of instilling confidence in the rating agencies is demonstrating the reliability and "robustness" of the models that estimate the loss potential to investors. It is this model

robustness or demonstrated reliability under the stressing of inherent assumptions that has enabled rating agencies to reach the level of understanding and comfort allowing them to issue favorable ratings for securities linked to a variety of insured perils around the world.

AIR is in a unique position to provide credibility and therefore instill confidence in rating agencies and investors with regard to the probabilistic modeling methodology that it pioneered. AIR's models have been utilized and tested by the insurance and reinsurance industry for over 12 years and their proven reliability provides a sound basis for pricing. Because AIR models have undergone extensive external review by government agencies and outside experts in addition to the battery of stress tests and sensitivity analyses required by the rating agencies themselves, rating agencies have gained a level of comfort with catastrophe modeling in general and with AIR models in particular.

Most securitizations have been issued to cover very high layer catastrophe risks (e.g., return periods of 1 in 100 years and higher). This corresponds approximately to industry insured loss of \$38 billion for Florida hurricane and \$34 billion for California earthquake. This was the obvious point of entry for investors as many analysts have long wondered whether the re/insurance industry would be able to sustain these levels of industry losses. This

credit risk concern logically extended to the uncertainty surrounding the availability and cost of capacity after such event. Certainly Hurricane Andrew demonstrated how the cost of risk transfer could correct severely.

Rate shock following a significant event is unlikely to occur to the same degree in the capital markets as it has in the reinsurance market. In the capital markets, as price increases for the same level of risk there will be new investors attracted to this asset class. This investor demand will lead to enhanced rate stabilization over time for all types of risk transfer benefiting all insurers.

Another important aspect of building the bridge of understanding between insurers and rating agencies is bringing lessons learned to the table. Hurricane Andrew served as the catalyst for changing how insurers communicate their exposures to their risk transfer partners. In 1993, AIR introduced to the industry UNICEDE™, which provided insurance companies the standardized format in which to submit their exposure to reinsurers. This format, which quickly became the standard for data exchange between insurers and reinsurers, allowed reinsurers to utilize more detailed exposure information and, therefore, greatly enhance the accuracy of their assessment of a company's efforts in managing its catastrophe loss potential.

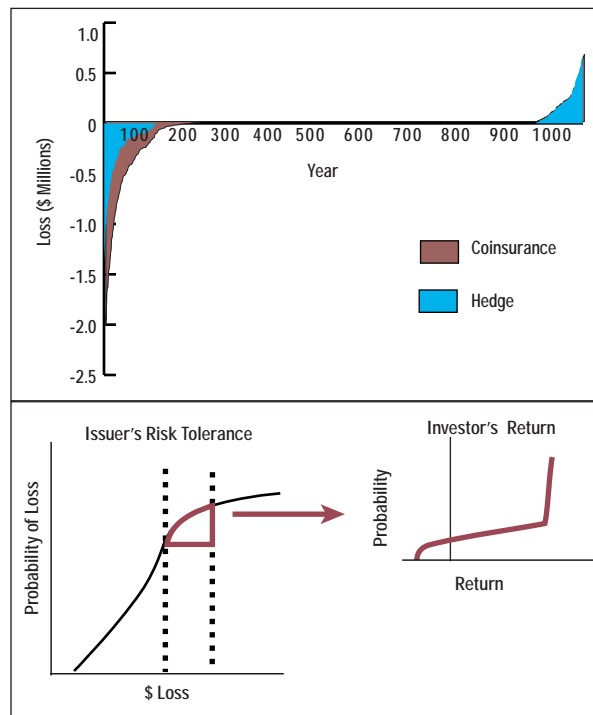
As companies continue to better assess and manage their exposures, the "average" industry assumptions upon which the UNICEDE methodology is based have become less precise for individual company analysis. To address this, AIR developed Company Loss Files (CLF™) which contain company specific losses modeled at a detailed level. These CLF allow all of the specific individual risk, location and policy and reinsurance coverage information to be factored into the estimation of catastrophe loss. This evolution in the way exposures are communicated to risk transfer partners was important in stimulating the investor interest in the insurance-linked asset class.

The detail demanded by investors will continue to grow as they become even more familiar with underlying

modeling associated with each new transaction. As the market grows investors are assembling portfolios of securities. They are seeking more detailed breakdowns of the risk drivers, including analysis of the correlation of losses, or, simply put, the probability of multiple transactions being impacted by the same event. Investors are also actively seeking the capability to more quickly determine loss potential in terms of impending events, as offered through AIR's ALERT™ service. Investors are also requesting more transparency between transactions, meaning they wish to immediately be able to determine the impact to expected loss across their entire portfolio of transactions from a change in one of those transactions. Again, AIR has supplied the tool for this in its CATRADER® software system.

Another area of mystique is the issuance of index-based derivatives and the associated basis risk. In these products, payouts are based on an index such as total industry insured losses as opposed to the actual losses of a company. Index-based products provide standardization leading to potentially lower costs, however, they have been underutilized to date. "Insurer concerns about basis risk are often overstated" says AIR's Mr. Lalonde. "Insurers have dealt with coinsurance for years, which is a form of basis risk in more traditional reinsurance structures." As an example, in a traditional reinsurance layer providing 90% of \$20 million in limit, the 10% coinsurance (or \$2 million) is the amount of basis risk to the insurer. In traditional reinsurance this "basis risk" is always negative whereas in derivative products there are additional probabilities of recovering amounts greater than the total loss. In a properly structured call spread, basis risk may fall within the level of coinsurance as illustrated in the graph above. But, as with other aspects of catastrophe risk, AIR's CATRADER will help you quantify basis risk – eliminating the mystique.

The cost of these transactions is also improving. The primary reason securitization transactions are relatively costly is because of the expense of the transaction itself. A portion of this transactional cost



So, whether your company ever issues an insurance-linked security or not, you have a vested interest in the securitization activity going on around you

relates to the educational process for investors and rating agencies, which requires that the issuer and the modeler commit significant time and resources, in conjunction with the investment bank, to investor meetings. These educational expenses have been largely borne out with respect to the modeling as the investors now have a good basis for comparing each transaction against its predecessors. Most investor questions during the face to face meetings now relate to data resolution and quality. Companies reissuing securities are gaining efficiencies and recent initiatives such as the NAIC's Protected Cell Model Act will allow this business to be brought back onshore instead of through off-shore special purpose vehicles. These efficiencies will help lower transaction costs making them even more appealing to insurers.

So, whether your company ever issues an insurance-linked security or not, you have a vested interest in the securitization activity going on around you. Securitization will not only continue to permeate your rating processes, it will also provide price and capacity stability to the risk transfer alternatives available to your company over the long term. *If you would like more information about AIR's products and services, please contact Wendy Lavin-Schilling at (425) 990-4703.*