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Flood—the Forgotten Peril

by Joseph J. Launie, Ph.D., CPCU, FACFE

No peril will be as affected by climate change as much as flood. This is almost too obvious. There is a feeling in much of the nation and even parts of the insurance industry that nothing can be done about this looming disaster. This phenomenon calls for a total revision of our approach to providing insurance for flood losses. Perhaps we should go back to the beginning.

The year is 1938. Artie Shaw's "Begin the Beguine" reaches number one on the Hit Parade. The economy is recovering from the recession. Franklin Delano Roosevelt told us that the only thing we have to fear is fear itself. A major hurricane hits New England.

Against this background, the conservative Fire Insurance Underwriters Association broadens its coverage. It brings out the Extended Coverage Endorsement, adding additional perils to fire policies for properties at fixed locations. It also adds the perils of smoke, riot, windstorm and hail, among others.

With the Long Island Express hurricane hitting the Northeast, hurricanes should have been on the underwriter's mind. Six hundred people drowned in Providence, Rhode Island, during that storm as a storm surge roared up Narragansett Bay and into the city. Hurricanes cause major property damage due to two perils, wind and flood. The extended-coverage endorsement goes halfway, providing only wind coverage. This was a major mistake which should be reversed. When a hurricane strikes an area,

damage is done by both wind and wave action. For many structures, these perils are often simultaneous. It is impossible, after the fact, to separate those two causes of loss and determine how much should be covered because of wind, and how much should not be covered because of wave action and flood. It would be much more efficient and would far better serve the insuring public to make both covered perils. After all, the fundamental force at work here is a hurricane.

When one discusses the peril of flood, underwriters quickly bring up the idea of adverse selection. One would not want to offer flood insurance in the regular market, the argument goes, since only those exposed to the risk would purchase it. If flood insurance were readily available, they go on, people would build more often in places threatened by flood. It seems they are building there now, without flood coverage readily available over the last 75 years, so that is not a powerful argument. Even if this argument had some merit, insurance works best when it confines itself to the risk-transfer business. That is what insurance underwriters know. It is best to leave local zoning and property-placement decisions to local zoning boards.

The identical argument could be made with regard to windstorm peril. Coastal properties from Texas; through the Gulf and up the entire eastern seaboard are subject to wind damage from hurricanes. A section of the Midwest has so many tornados that it is known as tornado alley. This was true in 1938 and is still true today, but underwriters have put wind in the extended-coverage endorsement. How does this work?

Windstorm coverage for properties at fixed locations is insurable because it is included in the extended-coverage endorsement. This endorsement, or a broader endorsement adding additional perils, is included in virtually every commercial and personal-lines fire policy written on fixed-location risks. This practice provides the spread of risk, keeping the premium affordable. This can also be done with the

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peril of flood and should have been done 75 years ago.

Some people say, "Why should I pay for flood coverage when I live on a mountaintop and will never need it?" The poet John Donne once wrote, "No man is an island. ... And therefore never send to know for whom the bell tolls. It tolls for thee." If someone's house on the New Jersey shore is flooded, it affects me in California because the owner of that house is a part of the community to which I also belong. Destruction of the property of one member of our community diminishes us all. The concept is best expressed by the constitution of Massachusetts, which indicates that it is not a state but a commonwealth. The wealth of the entire community is diminished if any part of it is destroyed.

Another problem with both wind and flood is the occasional catastrophic loss. Wind-insurance underwriters have managed to deal with the catastrophic-loss risk with their regular reinsurance.

Is the flood risk insurable in the private sector? The auto and boat insurance underwriters seem to think so. The comprehensive physical damage coverage for autos includes flood coverage in personal-lines policies. Commercial inland marine and similar business policies routinely include flood in the perils. Early reports from Hurricane Sandy in New York and New Jersey include an estimate that 250,000 vehicles have been destroyed. Toyota reports the loss of 4,500 new vehicles. Yacht policies also include flood coverage, and boat losses are extensive.

It is clear that Hurricane Sandy has incurred insured flood losses at a catastrophic level for auto and marine insurers. The insurance industry appears to be taking this level in stride because reinsurance is in place.

On the fixed-property side, fire underwriters are absorbing major catastrophic losses from the peril of windstorm. Loss adjustment in this type of storm is a nightmare. Charleen Adjuster pulls up to a house on a barrier island near the New Jersey shore in her SUV. She finds the property address, but the house seems to have left. Inland there is some debris, partly burned. She is left to estimate the unknowable while dealing with insureds that have suffered unthinkable losses. One scenario: the wind destroyed the house, which then burned, and then the sea swept everything away. Sounds like insurance coverage. Another scenario: the sea knocked the house down, the house then burned, and the debris was blown away by the wind. No coverage. Or the butler did it in the library with the candlestick.

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It will not take too many of this type of loss-adjustment assignments for the adjuster to wish she had taken up a safer form of work, like disarming bombs. The difficulty goes back to the decision made in 1938. Rather than the mellow sounds of Artie Shaw, perhaps the underwriters writing the endorsement were distracted by Ella Fitzgerald and that other number-one song, "A-Tiskit, A-Tasket."

The flaw in the extended-coverage endorsement is that it creates a theoretical peril, wind, which in some cases occurs alone. In many highly significant instances, such as a hurricane, wind cannot be separated from high waves, storm surge and heavy rain that causes ponding. Selecting one named peril out of that set, windstorm, and ignoring the rest make as much sense as deciding you want to hit only the stitching on a baseball and ignore the rest of it. The baseball comes in one piece, and so does the hurricane.

On a theoretical level, insurance is a risk-sharing mechanism. The larger the cohort sharing a particular risk, the better insurance works. In New England many years ago, barn fires were a major disaster. If Farmer Jones's barn burned, his neighbors had a barn-building bee. The men all worked to rebuild the barn; the women cooked. Everyone worked too much, ate too much and drank too much and had a great time. The barn was replaced. Modern risk-sharing devices are more complex but work no better.

California State University, Northridge had a practice of requiring professors returning from sabbaticals to meet with the president and tell her what they did. When it came time for my "what I did all year" talk while drinking tea in President Blenda Wilson's well-appointed living room, I told her I had been working on insurance theory. "I did not know insurance had a theory" was her wide-eyed comment. It does. Perhaps she was just pulling my chain. She received a graduate education in risk management when the Northridge earthquake hit, with its epicenter on campus, in 1994. She was there on campus every day in a hard hat and boots, leading the recovery of a university at which 80 percent of the buildings were damaged or destroyed by the quake. She recreated the university in rented trailers and tents, and we did not miss a single day of the next semester. She helped us realize that a university is made up not

(**Flood**, continued from opposite)

of buildings but of people.

From the standpoint of insurance theory, the present flood-insurance program has two fundamental faults. First the program's market penetration is poor — too few homes and businesses have any flood-insurance coverage. Those without coverage assume a risk they cannot fund. This is a clear indication of the breakdown of the system. Second, the present program sets low limits on the amount of coverage for the risks that can buy the coverage. Over that layer of coverage, the property owners are once again assuming a risk they cannot fund. It works no better here than where there is no insurance.

The underinsured and uninsured end up falling back on a patchwork quilt of federal relief programs which spend huge amounts of money with questionable efficiency. Local, state and federal agencies put in heavy amounts of effort, manpower and money and try very hard, but the final result often falls below the desired recovery level.

The charming musical comedy Brigadoon, tells of a small village in rural Scotland that reappears for one day every one hundred years. In some ways, FEMA's catastrophe efforts have a Brigadoon quality. The entire effort is reinvented after each disaster.

Assuming, arguendo, that the underwriters in 1938 were distracted by Ella Fitz and blew it, how do we fix it? The fix is actually quite simple. First we add the flood peril to the extended-coverage endorsement. Windstorm has been in the extended-coverage endorsement since 1938. If we look at the loss distribution for windstorm losses by county, nationwide, for the last 10 years, we will find great variation. In some counties losses are de minimus. In others they are huge. However, because of the spread of risk and the total market penetration, it works.

The first step in dealing with the flood problem, therefore, is to add flood to the extended-coverage endorsement and require at least fire and extended coverage on all property-insurance policies written for commercial and personal-lines risks, insuring properties at fixed locations. That will provide total market penetration. With this level of penetration, there can be no adverse selection, because everyone has the coverage, high risks and low risks.

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There is more than one way to deal with the catastrophic-loss problem. One approach would be to recognize that the federal government is the insurer of last resort. In a major catastrophe the federal government stands behind the economy to prevent chaos.

The federal government could write catastrophic excess of loss reinsurance for all policies covering flood under the extended-coverage endorsement. The level at which the federal excess of loss reinsurance would attach would be a function of the size of the book of property business in that particular company. A catastrophic amount for a small county mutual insurance company would be just another day at the office at State Farm.

Now we come to the premium for this federal reinsurance. My first impression would be to set it at zero, recognizing that this is just another way of distributing federal disaster-relief funds. This would probably cause teacups to fall and break nationwide. Another approach would be to have no set-up or overhead charges but to charge just for losses on a retrospectively rated basis, with the federal government providing a large subsidy. To keep these charges from bankrupting insurance companies, the premium payments could be made by issuing 30-year bonds at a low rate, such as the London LIBOR rate. The insurance company would therefore repay the federal government with interest over the next 30 years, spreading the loss over time as well as in space.

While FEMA does a great job in spite of the Brigadoon effect, insurance companies have a national force of adjusters who are already in place when catastrophe strikes. The federal government, especially FEMA and the National Guard, can and should augment those efforts, but the adjusting force does not have to be reinvented after each disaster. Widespread flood insurance at adequate amounts can greatly mitigate the next flood-related national disaster. It can be done.

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FROM NEAR AND FAR

Munich, Germany – According to a report published in *Business Insurance*, Munich Reinsurance Company said that almost half of the economic losses and as much as 45% of insured losses from natural catastrophes this year were caused by flooding.

London – Lloyd's chief executive officer, Richard Ward, has said that he intends to step down from the position at the end of the year. He has been CEO of Lloyd's for almost eight years.

Munich, Germany — The most costly natural disaster this year so far was the flooding in Central Europe, primarily in Germany and some other eastern European nations, that occurred in May and June. Estimates for insured losses alone are at almost $4 billion.

Oklahoma – The economic losses from the deadly tornado that tore through Oklahoma in May will probably pass $3 billion. Almost half of that will be insured losses. Estimates are from Munich Re.

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