Seven Simple Lessons on the Mortgage Crisis from Two Actuaries

by Randy Roth and John Pierce

We have been observing the mortgage crisis over the recent months. To some extent, we are like Will Rogers in that all we know about the crisis "is what we read in the newspapers." Even though we lack the practitioner's in-depth knowledge of the mortgage industry, it does seem to us that lessons we have learned in the property-casualty insurance industry have relevance to the mortgage crisis. These seven lessons—based on admittedly imperfect understanding of the exact structure of the underlying mortgage industry—are listed below:

1. Never Assume Someone Else Will Serve Your Own Interest Better Than You Will.

In the property-casualty insurance industry, we know that managing general agents (MGAs) have interests which are different than the interests of the insurance company. Because of this, it is standard practice to establish incentives that align the interests of the MGAs and the insurance companies. Commonly, an MGA is required to "have some skin in the game"—either by retaining a share of the business it produces through an agent-owned captive or by a commission structure that is responsive to its business' loss experience.

In this mortgage crisis, it appears mortgage brokers and mortgage originating banks were similar to unchecked MGAs. These brokers and banks had an incentive to produce mortgages that would generate fees for them. Those mortgages would then be sold to investors, generating additional fees—but it appears there were often no incentives to align the interests of those mortgage producers with the purchasers of these mortgages. The brokers and banks "did not have any skin in the game."

2. It Is Always a Recipe for Disaster When a Secondary Market Risk-Taker Fails to Adequately Comprehend and Evaluate the Risk Being Accepted from a Primary Marketplace.

There have been instances where a naïve reinsurer will take small shares (1 percent or 2 percent) of several larger reinsurance treaties, and will then justify its actions by saying "How can we be hurt too badly? We are only taking a small share." In some cases, additional layers of reinsurers took a share of the first reinsurer's business. This process was labeled the "reinsurance spiral." These naïve reinsurers often learned just how badly they could be hurt by these "small shares" of the underlying business. In these cases, there was no substitute for making your own analysis of the ultimate profitability of the underlying reinsurance treaties.

Similarly, investors who relied on the various rating agencies or the reputations of the originating banks to determine which mortgage-backed securities (i.e., combinations of small slices from many individual mortgages) to purchase now understand that there is no substitute for doing one's own analysis of an investment risk.

3. Don't Confuse Dispersion with Diversification.

From our experience in the insurance industry, we know a diversified pooling of non-correlated similar exposures does reduce risk for the pool and does achieve greater predictability of pooled outcome. However, mortgage securitization appears to have led to global dispersion of pools consisting of relatively little slices of mortgage risk that were positively correlated. The risks in the pools of mortgages may have been dispersed—but they were not diversified in any meaningful sense. When trouble hit the entire U.S. real estate market, each of the little slices in these mortgage securities was impacted.

4. Never Assume That There Is Only One Cockroach.

From our experience with loss reserve problems, we have learned that oftentimes the first estimate of a major problem proves to be optimistic. Often further emergence of loss reserve deficiencies shows that the initial estimates of the problem's size were too low. In "actuarial" terminology, we say "there is never only one cockroach."

It appears many financial firms did not understand this concept of "one cockroach"—as their initial estimates

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of losses due to the mortgage crisis generally have been revised upwards several times.

5. You Can Fool Some of the People Some of the Time but...

Many smart people have devised clever and complicated schemes to camouflage risk, but it always results in a game of musical chairs where someone loses when the music stops. For example, Lloyds has a complicated three-year accounting practice with an assumed likelihood of a syndicate's ability to purchase closing reinsurance. While this complicated structure served Lloyds well for many years, it eventually failed to protect naïve investors from the ravages of U.S. asbestos and pollution liabilities.

It appears that many of the mortgage securities that were purchased by investors were relatively complicated in their structure. In retrospect, one can wonder whether this complicated structure camouflaged the underlying risk in these instruments.

6. The Regulator Is Not Always Your Enemy

While compliance with the insurance regulatory process is often burdensome, we know it may force us to recognize a problem that we would not otherwise recognize. If the regulators of our banking industry had been as rigorous as the regulators of our own insurance industry, perhaps this mortgage crisis would never have happened.

7. Risk Assessors Need a Proven Record of Professionalism, Credibility and Objectivity

The current mortgage crisis plus earlier financial collapses this decade have severely damaged the reputations of credit rating firms, the banking industry and other risk-assessing professionals. As a result, it will take much time and effort for risk assessors to restore customer confidence and trust.

While the actuarial profession is not free of any blemishes in this arena, actuaries as a whole take pride in their professional accomplishments. Our profession has taken steps to protect and enhance our reputation, and these recent experiences demonstrate the need that we continue to do so.

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