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Where to begin? (And, more to the point, where will it all end?) Just a few months ago we were looking at slightly disrupted financial markets and some shakiness among financial institutions, epitomized by the Bear Stearns bailout last spring. Almost no one was anticipating that the financial system would fall off a cliff within a few weeks. We have gone from what might be described as “a rough patch in the markets” to “the worst financial crisis since the Great Depression.” And, as usual, when it comes to “rounding up the usual suspects,” righteous commentators are bound to point angry fingers at derivatives. Unfortunately, one must admit that credit derivatives do figure heavily in some of the more spectacular incidents, such as the bailout of AIG that has required over \$100 billion of public money so far, not to mention subprime mortgage-backed CDOs. But so much of the public discussion reveals a serious misunderstanding of how derivatives actually work. Lost in the argument, for example, is the fact that every derivative instrument is a zero-sum game with two sides. When XYZ bank loses \$1 billion on a credit default swap position (How awful!), the counterparties to the trade make a \$1 billion gain (How wonderful! Those prudent derivatives trades saved them from taking a \$1 billion hit!). Focusing only on the loss, however, leaves out half of the trade (the good half). Oh well. Maybe it is unavoidable human nature that when something goes wrong to blame whatever is around that is not easily understandable.

Passing to more immediate matters, this Winter 2008 issue of the *Journal of Derivatives* begins with an article on the rather timely topic of assessing the validity of pricing models for CDO tranches. Specifically, it is well known that the standard Gaussian copula model involves a number of simplifying assumptions that are plainly violated in the real world and also that the model generates a v-shaped implied correlation skew, which reveals a substantial inconsistency between theoretical and real world pricing. Ağca, Agrawal and Islam explore how important each of the simplifying assumptions is and the extent to which each might account for the correlation skew pattern. (Alas! No smoking gun is found, but we do gain a lot of insight about the assumptions of the Gaussian copula model.)

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The next piece by Barone-Adesi, Fusari, and Theal offers a useful way to improve the performance of a lattice-based model for pricing options with very general barriers. Errors arise in a lattice because node probabilities that are near a barrier include some paths that would penetrate the barrier in the middle of the next time-step, but are on the same side at the end. Adjusting the probabilities at those nodes can make a substantial difference in accuracy.

The next article offers some new results on a perennial favorite topic—value-at-risk (VaR). Pérignon and Smith suggest evaluating the performance of a given VaR method by measuring empirical accuracy not just at one point, but at multiple points, in the tail. They then apply the technique to compute VaR for revenues of major banks using data constructed from the visual analysis of graphs shown in the banks' annual reports.

Next, Branger, Breuer, and Schlag examine the difference between optimal delta hedging in a theoretical continuous-time Black-Scholes world versus the strategy that would be optimal under stochastic volatility when rebalancing can only be done at infrequent intervals. Having another hedging instrument in addition to the underlying stock, either a second option or a variance contract, makes a lot of difference to the point that much of the theoretical utility gain from continuous rebalancing can be achieved even when rebalancing is only done once a month.

The last article in this issue, by Choi, explores the behavior of the credit spread in a structural credit risk model when complete information is released, but only with a lag. He shows that this delayed release is enough to keep the credit spread well away from zero, even if, when it becomes known, the correct information will show the firm is far from default.

Like many others of us academic types, safely tucked away in our Ivory Towers, I have been thinking hard about the crisis, writing articles to explain what is happening, and attempting to devise plans to deal with the situation. If you are interested in seeing some of this material, including an expository piece written for the intelligent layman called "Viewing the Financial Crisis from 20,000 Feet Up," which offers a general approach to defusing the crisis, and "From an 'Approach' to a 'Plan,'" which suggests more specific steps to turn the general approach into an implementable strategy, these are available on my website at <http://pages.stern.nyu.edu/~sfglews/>.

Let us hope the world will have gotten somewhat back on track by the time the next issue comes around. The financial markets need a "change we can believe in."

Stephen Figlewski
Editor

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