

D THE JOURNAL OF **DERIVATIVES**

VOLUME 22, NUMBER 4

SUMMER 2015

STEPHEN FIGLEWSKI	Editor
SANJIV DAS	Co-Editor
ROBYN VANTERPOOL	Editorial Assistant
HARRY KATZ	Content Production Director
DEBORAH BROUWER	Production/Design
CATHY SCOTT	Content Director
DESSI SCHACHNE	Marketing Director
SHARON CHIEN	Marketing Manager
DAVID MARKS	Account Manager
DENISE ALIVIZATOS	Account Manager
WILLIAM LAW	Regional Sales Manager
DEWEY PALMIERI	Reprints Manager
VINCENT YESENOSKY	Head of U.S. Fulfillment
CHERLY BONNY	Customer Service Manager
BEN CASTLE	Finance Manager
NICOLE FIGUEROA	Business Analyst
DAVE BLIDE	Associate Publisher
BHUVNA DOSHI	Digital Advertising Operations
DAVID ANTIN	CEO
ALLISON ADAMS	Group Publisher

Every issue, I try to think of something suitable and topical with which to start the Editor's Letter. Often I start off with a combination of politics and events in the financial markets. So, I first thought about the upcoming U.S. presidential election. It's right around the corner, a mere 18 months from now, which is really not much time to spend the more than \$3 billion that the campaigns are planning for the effort. Of course, the Brits managed to conduct their recent election campaign over just a few weeks, under rules that limit each party's spending to less than \$29 million. But I'm sure it wasn't nearly as much fun as ours is going to be.

At this point, the incentives are so different between Democrats and Republicans. On the Republican side, there are already 15 declared candidates and 10 more are "exploring" a run, including several high probability candidates, such as Jeb Bush and Scott Walker. They seem to be holding back because as non-candidates, they can raise money with even less oversight than after they are formally running. With such a large number of options for Republican voters to choose among, every one of them must be considered deep out of the money. As we know, the way to enhance the value of an out-of-the-money option is to increase volatility. Some candidates are doing so by touting the fact that they have never held any elective office before. The argument, one supposes, is that nothing would make things more volatile than having someone with absolutely zero political experience running the White House. Other candidates are content to show their volatility credentials through intemperate sound bites. It is going to be a very interesting, and bloody, campaign for the Republican nomination.

By contrast, the Democrats' Hillary Clinton option is so deep in the money right now that it seems almost immune to volatility. Potentially damaging news stories just slide right off, causing little to no political harm so far. With little optionality, her best strategy becomes trying to raise the value of the underlying asset (the Democratic program) without worrying about volatility. Indeed, it may even pay to encourage the entry of volatility-based minor candidates who can divide the votes of the few Hillary-averse Democrats among themselves.

Well, I had decided not to write about politics, focusing instead on the continuing series of revelations that have called

D THE JOURNAL OF DERIVATIVES

into question fundamental pillars of the world's derivatives trade. We now know about cheating in the LIBOR fixing, cheating in the FX market, cheating by large financial institutions throughout the mortgage mess, and more. But unfortunately, once I started writing, politics got the better of me, so now I had better leave it for another day, and another Editor's Letter, to express my sadness and deep outrage about the damage to the integrity of derivatives in our financial system. Let's turn instead to what is a very nice issue of *The Journal of Derivatives*.

Our first article, by Kopeliovich, Novosyolov, Satchkov, and Schachter, addresses a problem that has become increasingly important as procedures for risk management at many firms evolve from a simple value-at-risk calculation to more formal stress testing under various assumed scenarios: How should one devise the most relevant and meaningful set of stress scenarios? The authors suggest a highly innovative approach that guarantees the most likely scenario with a specified level of risk will be included in the set, and the others will all have the same risk yet be designed to give the best coverage of the space of possible scenarios. In the next article, Suchintabandid takes a fresh look at the "correlation skew" in tranching credit portfolios. Implied correlations should be equal across the different tranches of a single deal, like implied volatilities extracted from a set of options on the same underlying stock. But neither of these holds in practice. The new idea is to consider that default correlation has a maturity dimension. The author finds that taking the term structure into account can go a long way toward flattening the correlation skew in the cross section.

Jones and Wu then look at the rather complicated optionality in a typical revolving credit loan. Fluctuations in interest rates and in the borrower's credit quality will affect drawdown behavior, and fees of some sort are needed on top of the interest paid on the drawn principal for the product to be profitable to the lender. Optionality in plain-vanilla stock options is also more complicated than the way Black and Scholes modeled it, due to stochastic variations in volatility. The GARCH framework is particularly valuable because it avoids adding a second stochastic volatility factor that would turn volatility into an unobservable and hard to estimate latent variable. But there are many GARCH

variants that differ in their dynamics or in the probability distribution assumed for return shocks. Stentoft conducts a horse race among 15 candidate GARCH specifications for the stocks in the Dow Jones Industrial Average and finds the NGARCH model with normal inverse Gaussian shocks does the best.

In the early days of credit default swaps, following a credit event the protection buyer would receive his payoff by delivering bonds of the underlying obligor to the protection seller, who would buy them at face value. Individual payoffs were affected by price dispersion in the bond market, and it was sometimes uncertain whether the supply of deliverable bonds would be adequate to satisfy all of the outstanding CDS contracts. This procedure has been replaced by a highly structured auction process designed to produce a single settlement price for the bonds. All CDS are then settled in cash based on this price. Gupta and Sundaram explain how the auction works, but they document unusual price behavior around the auction. The pattern could potentially be exploited to make substantial trading profits, but this actually appears to be compensation for illiquidity risk around the auction.

We end with two small pieces. Chen and He correct (the published version of) Geske's compound option model and provide additional Greek letter results. Lastly, Tuckman reviews the latest edition of Crouhy, Galai, and Mark's book, *The Essentials of Risk Management*, which was published last year.

This is the final issue in Volume 22 of the JOD, so another year has gone by. Is it possible? Could it be that the Earth is going around the sun faster than it used to? It certainly seems that way, but I suppose it might just be a subjective impression.

One thing that is certain, however, is that the current school year is at an end, meaning that once again hearty congratulations are in order for all fresh graduates, at all levels. This year there may even be jobs for you! Best wishes also to their families and friends.

Have a great summer!

Stephen Figlewski
Editor