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The balance of power in the U.S. Congress has tipped again, but the future seems as unclear as before. Despite public disgruntlement about the ongoing situation in Iraq, the ideas put forward to resolve the situation all look like long shots. The twin deficits in the federal budget and the U.S. balance of payments continue their relentless advance. The housing market is in crash mode, the personal savings rate remains in negative territory, the long-term outlook for Social Security, Medicare and Medicaid is in total disarray. And then there's global warming to to burn up whatever worry quotient may remain.

But the financial markets are visibly unimpressed by all of this negative news. The Dow keeps hitting new all-time highs, while equity volatility hovers near its all-time lows, and the same holds for corporate defaults and credit spreads. Inflation is low and stable, as are long-term interest rates; corporate profits are terrific and unemployment is down. One can only wonder: how can the markets look so good when we're in such a mess? Fortunately, we don't have to resolve this mystery here. Let's turn our attention to this issue of the Journal of Derivatives instead.

The leadoff article takes a new and very close look at Greek letter risk in stock index futures options. Delta hedging, the workhorse of options risk management, fully eliminates risk when the price of the underlying changes by only a marginal amount and volatility and the interest rate are fixed. For larger price moves, the curvature of the option value function enters, as measured by gamma, and implied volatility can change as well. But even after these well-understood extra factors are accounted for, there is still quite a lot of residual option price risk. Ederington and Guan show that a few of the other second and third order Greek letter-type sensitivities can also be important.

The next article looks at the VIX volatility index. Volatility has long been recognized as a key factor in the performance of option strategies, and the market's volatility prediction is certainly a useful piece of information. The new VIX methodology is designed to extract an implied value for volatility from the prices of a broad array of options in the market. But as Jiang and Tian show, the approximations used in constructing the VIX can introduce substantial errors in even the plainest of plain vanilla cases. They offer

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an alternative approach that can significantly mitigate the problem.

The next paper, by Loukoianova, Neftci and Sharma, models the contingent features in a contingent credit line (CCL) between a bank and a borrower, in which, interestingly, both counterparties have important options. The borrower draws on the CCL only if the credit spread is narrower than what the borrower faces in the market. But the bank is not obliged to honor the CCL if the borrower's credit quality falls below an acceptable level (i.e., its credit spread in the market is too wide). They find, for example, that the CCL has maximum value to the borrower when its credit spread in the market is a little higher than the CCL spread, but not too much higher.

The last two papers consider the problem of estimating probability distributions for losses on a credit portfolio. One difficulty is that the industry standard Gaussian copula model is relatively easy to use, but the tails of the Normal distribution are too thin and correlations in the tails of the multivariate Normal are too small to capture how the market expects correlated default risk to behave in practice. The Student t-distribution has better tail behavior, but it is computationally intractable for large problems. Here, Kalemanova, Schmid and Werner propose an alternative, the Normal Inverse Gaussian distribution, which performs well in both dimensions. Finally, van der Voort observes that in the Gaussian copula model, a default by one firm significantly increases the expected default correlations among the remaining credits. But an obviously idiosyncratic default, such as Enron, should not be interpreted as providing new information about the common factor, nor should it cause investors to change how correlated they perceive default intensities for other firms to be with each other. He suggests adding an extra idiosyncratic default term to the copula model to deal with this and shows that it improves the behavior of the correlation skew across CDO tranches.

On February 8, 2007, the International Association of Financial Engineers presented its annual Financial Engineer of the Year Award to Jim Simons, founder of Renaissance Technologies. Jim began as an academic but left the Ivory Tower and his position as chairman of the Math department at the State University of New York in Stonybrook to pursue an interest in investing. It appears he has a little talent in that direction as well. Over the last 16 years, the Renaissance Medallion Fund has earned a breathtaking 35% average annual return after expenses. This performance goes way beyond "knocking the cover off the ball." It's total obliteration of the ball. Hearty congratulations to Jim Simons for a great track record and a well-deserved honor!

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