

D THE JOURNAL OF **DERIVATIVES**

VOLUME 10, NUMBER 1 FALL 2002

STEPHEN FIGLEWSKI	Editor
ROBYN VANTERPOOL	Editorial Assistant
PATRICIA B. PEAT	Copyeditor
<hr/>	
HARRY KATZ	Production Director
PEGGY MALONE	Production Supervisor
MICHELLE WRIGHT	Senior Production Artist
DAVID GOMBAC	Copyeditor
AJANI MALIK	Reprints Manager
<hr/>	
ESTHER RODD	Marketing Director
INGRID BONEY	Marketing Manager
STEFANNY HSU	Senior Marketing Associate
LARRY MACON	Subscription Sales
<hr/>	
JOHN POLEK	Web Coordinator
<hr/>	
MARYANN ARMOND	Account Manager
NANCY SAGL	Account Manager
KATHY ANDREW	Advertising Coordinator
<hr/>	
ALEX BELINSKY	Fulfillment Director
CHERLY-NINA BONNY	Fulfillment Supervisor
<hr/>	
DAVID E. ANTIN	Director of Finance and Operations
JESSICA REID	Group Finance Manager
KAREN LEE	Business Manager
<hr/>	
ALLISON ADAMS	Publisher
CHRIS BROWN	CEO

It gives me great pleasure, along with a certain amount of amazement, to observe that this issue is the first in Volume 10 of *The Journal of Derivatives*. We're in double digits! Consistent with the recent worldwide observance of the start of the new Millennium on January 1, 2000, I hereby declare this to be the "10th Anniversary of the *JOD*."

This is a good time to thank the people who have worked hard throughout the years to make the *JOD* a success. I am particularly grateful to my Editorial Assistant Robyn Vanterpool, our copy editor Pat Peat, the publisher Allison Adams, the production director Harry Katz, and all of the others at Institutional Investor who labor long and hard to produce the journal four times a year. I would also like to recall with deep appreciation the contributions of several people who were extremely helpful over the years but are no longer with the organization: Noelle Schultz, Gauri Goyal, and the original publisher, Lily Kung, who first invited me to start the *JOD* more than 10 years ago. Special thanks also to Bob Jarow, who just stepped down as Co-Editor, and (as an advance on future gratitude) thanks to the incoming Co-Editors, Sanjiv Das and Raghu Sundaram. Most important of all, however, my most profound thanks go to all of the authors who provide the material for the journal. They are the ones who do all the real work, after all. The rest of us just process and distribute it.

During this year, we will be introducing several changes to the *JOD*. Consistent with the general theme that what *The Journal of Derivatives* tries to publish is what people who are interested in derivatives want to read about, we are going to include more articles that are not original research, but are primarily expository or informative pieces on topics that our readers should find valuable. For example, in the pipeline right now is an article on how to apply the Generalized Method of Moments in estimating option pricing models, and another on building valuation models with more general stochastic processes in modular fashion using characteristic functions and Fourier inversion. We also will begin doing book reviews on a regular basis. And, of course, the regular Innovations section will continue. Also, if you are submitting a manuscript (please do!), check out the revised submission guidelines at the end of the journal. And be sure to look for the *JOD* home page on the Internet (www.ijod.com) where you can view articles electronically, see the "Best of *JOD*" articles, and more.

D THE JOURNAL OF DERIVATIVES

This issue has a number of very nice articles. The lead article, by Collin-Dufresne and Goldstein, presents a new approach to empirical estimation of interest rate derivative models which depend on the term structure. Within the broad affine class of models, the underlying factors driving the structure of forward interest rates typically follow simple stochastic processes, like lognormal diffusions. But the interest rates themselves do not, making for arduous numerical evaluation of multivariate integrals. The new technique introduced in the article produces an enormous improvement in pricing performance by using easily computed analytic functions to approximate the probability distributions. Next is an article by Hodges and Tompkins that looks at an important, and under-appreciated, problem: the size and behavior of the statistical error in estimating volatility from empirical returns data. My personal belief is that model risk, of which estimation risk is a substantial part, should be considered a major component of overall risk exposure in a portfolio containing derivatives, and evaluated as such. This article helps us to understand better the sampling properties of volatility estimated from market data, and also presents an improvement to the methodology that permits the efficient incorporation of estimates from overlapping sample periods.

In the third article, Metwally and Atiya offer a procedure for efficient Monte Carlo simulation of jump-diffusion processes. Much evidence suggests that real-world asset price processes follow diffusions with occasional random discrete jumps. But straightforward application of standard Monte Carlo techniques to simulate jump-diffusions leads to a heavy burden of computation. This article shows how to put in the jumps efficiently, resulting in an improvement of several orders of magnitude in pricing performance. Next is a article by Kerkhof and Pelsler that examines the new class of term structure models known as “discrete string” models. While string models are conceptually different from the more familiar LIBOR market model, the authors show that observationally they are equivalent, if they start from the same initial yield curve and use the same number of

factors. Bodurtha and Thornton then take up a problem that is embedded in the way the new accounting standard FAS 133 treats hedges involving options. They show why the new accounting rule can lead to spurious volatility in reported earnings, and argue that the best way to fix it is to change the treatment of option hedges. Failing that first best solution, however, they offer a clever alternative solution within the current rules that uses new types of derivative instruments effectively to hedge the earnings impact of a regular hedge.

For the final article in this issue, I indulge in a little editorial license to include a piece of my own research. The questions discussed in the article strike me as fundamental to understanding the connection between option pricing theory and practice, and yet they are seldom addressed explicitly: Why are theoretical valuation models derived from assumptions that do not hold in the real world so useful to traders, and secondly, how should one judge how useful our models actually are in practice? What it suggests is analogous to our procedures for evaluating the performance of a portfolio manager. We judge an active manager by comparing his portfolio’s return against a passive investment strategy with the same risk exposure. Applying the same reasoning to evaluate the contribution of an “active” pricing *model*, such as Black-Scholes, we suggest that its performance should be compared to that of an “informationally passive” benchmark model, to see how much is gained from active theory, relative to what we would have known about option prices already without the model. One might think of this marginal contribution as the model’s “informational alpha.” The article examines one possibility for such a passive model. Without spoiling the suspense too much, I can reveal that outperforming a good passive benchmark does not seem to be a whole lot easier for a pricing model than it is for a portfolio manager.

I hope you enjoy the 10th Anniversary issue of *JOD*!

Stephen Figlewski
Editor