

STEPHEN FIGLEWSKI
Editor

CHEL S. DONG
Art Director

PATRICIA B. PEAT
Copy Editor

NOELLE VALENTE
Editorial Production
Director

DANIELLE DI SESSA
Production Manager

ROBIN DUCHARME
Director of Advertising

LILY KUNG
Associate Publisher

SCOTT ROCKMAN
Group Publisher

THE JOURNAL OF DERIVATIVES

VOLUME 2, NUMBER 4

SUMMER 1995

On November 3-4, 1994, a major conference, "Derivatives: The State of the Art," was held at the Stern School of Business at New York University. Sponsored by the Salomon Center for the Study of Financial Institutions, the conference brought together many of the foremost academics and practitioners in the field of derivatives for a remarkable day and a half. This issue of *JOD* is devoted to some of the papers presented at that conference.

The keynote address was given by Fischer Black, who offered his unique perceptions on key issues of public concern about the derivatives markets. As always, Fischer's talk was full of provocative thoughts. One highlight was his argument that most financial risk borne by securities firms is not intrinsic to the system, but forced on them by customers who *want* risk, such as that entailed by long-term fixed-rate mortgage contracts.

The presentations fall into two categories: the first part reviewed "the state of the art" with regard to where derivatives theory and practice are right now. The second part consisted of papers that "pushed the envelope" of derivatives modeling into new territory.

The field of derivatives has developed so rapidly that models, methods, and markets unknown or at least very exotic five to ten years ago are standard today. In our first review paper, Tom Ho looks at the development and current practice of interest rate modeling for derivatives, tracing the evolution from the single-factor models of the 1970s to today's full-blown arbitrage-free approaches. The next paper, by Clifford Smith, discusses the conceptual underpinnings of the use of derivatives in risk management for corporations. Because the whole corporate form has been developed largely to allow investors to manage risks at the portfolio level, it is appropriate to ask why a firm should try to hedge at all, instead of letting the shareholders do it for themselves. Smith offers a number of interesting insights into this and related issues. Gastineau then discusses the evolution of equity derivatives trading, and focuses on cost reduction as a prime factor explaining growth, both past and future. Kaushik Amin completes the set of reviews with an exposition of lattice-based numerical valuation procedures.

Three of the papers from the second part are presented here. The first, by Engle and Rosenberg, is an examination of option hedging when the underlying asset follows a GARCH-type stochastic process. The essence of the analysis is the demonstration that volatility changes with such a process produce significant effects on option gammas. Continuing the theme of improving hedge technology, Boudoukh, Richardson, Stanton, and Whitelaw present "Multivariate Density Estimation," a new methodology for fitting futures hedge ratios for mortgage-backed securities that goes well beyond the traditional regression approach. The procedure permits a much more flexible relationship between the futures price and the securities being hedged, and also takes into account exogenous data about the current economic environment. Finally, Derman, Ergener, and Kani consider the practical problem of option replication. The need for frequent rebalancing of a replicating portfolio creates both risks and costs for market makers attempting to match the payoffs on a particular instrument, especially an "exotic" option contract. The authors offer a procedure for constructing a static hedge portfolio that doesn't require rebalancing at all.

This is the last issue in Volume 2. The growth and development of the journal have been remarkable, and it is now safe to say that it has become an outlet for some of the most interesting and valuable work being done now in the field of derivatives. Thanks and congratulations are due to one and all: the authors, the production staff, the Associate Editors, the outside reviewers, and particularly our readers.

Stephen Figlewski
Editor