
INTRODUCTION

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The Journal of Investment Management is honored to present this special issue, commemorating the 50th anniversary of the pioneering Black-Merton-Scholes option pricing model. This issue, the first of two dedicated to the 2023 CISDM conference at UMass Amherst, brings together profound insights and contributions from some of the most distinguished figures in the field of finance, including Nobel Laureates Robert Merton and Myron Scholes. The CISDM conference, spearheaded by Professor Sanjay Nawalkha, alongside CISDM Director Hossein Kazemi and Associate Director Mila Getmansky, celebrated not just a half-century of the Black-Scholes-Merton model but also the transformative impact this framework has had on global finance.

This issue begins with a compelling keynote speech by Nobel Laureate Robert Merton, titled “Retirement Security Bonds.” Merton’s address offers an innovative approach to solving the global challenge of retirement funding by proposing Retirement Security Bonds (RSBs). These bonds aim to provide a stable, predictable income stream for retirees, addressing the uncertainties inherent in traditional retirement planning methods. Merton’s exploration of RSBs underscores the enduring relevance of financial engineering in addressing some of the world’s most pressing financial challenges.

Following Merton’s speech, the issue features a heartfelt and insightful address by Emanuel Derman titled “About Fischer Black.” In this speech, Derman reflects on the life and contributions of

Fischer Black, offering a deeply personal account of his interactions with Black during their time at Goldman Sachs. Derman’s tribute captures not only Black’s genius but also his humanity, providing readers with a rare glimpse into the mind of one of finance’s most influential figures, whose work laid the foundation for modern financial derivatives despite not living to see his recognition with the Nobel Prize.

The main section of this special issue is composed of four groundbreaking articles that extend and apply the Black-Merton-Scholes framework to address contemporary financial challenges. Unlike the past 50 years, which predominantly focused on the valuation of contingent claims, these four articles advance a rapidly evolving research area on the risk and returns of contingent claims and their broader connection to equity market returns. The article by Sanjay Nawalkha and Xiaoyang Zhuo introduces the *Equivalent Expectation Measures theory*, offering a significant generalization of the Black-Merton-Scholes model and the martingale pricing theory. The generalized framework provides analytical solutions for the calculation of expected returns, variances, covariances, and other higher-order moments and co-moments of contingent claim returns over a finite horizon. The new framework is applicable to over \$120 trillion worth of fixed income securities and financial derivatives, substantially broadening Markowitz’s risk-return efficiency frontier for asset allocation and portfolio analysis.

Douglas Breeden's article delves into the intricate relationship between stock market insurance prices, the Breeden-Litzenberger Skew (BL Skew), and the equity risk premium. The BL Skew compares the prices of downside and upside insurance and is shown to be a powerful predictor of future equity returns, outperforming traditional indicators like dividend yields and implied volatility skews. Breeden's work provides valuable insights into how option prices reflect market sentiments, particularly through the introduction of this measure of risk aversion in financial markets.

The paper by Bryan Kelly, Leandro Gomes, and Roni Israelov presents a statistical model for forecasting option returns, focusing on the S&P 500 index options market. The authors demonstrate the high degree of predictive accuracy of their model for means, volatilities, and extreme quantiles of option returns. Their work highlights the flexibility and economic application of their model, particularly in risk management and portfolio choice.

Finally, the paper by Gurdip Bakshi, Charles Cao, and Zhiwu Chen challenges the traditional Negative Correlation Condition (NCC) of Martin (2017) by providing empirical evidence that undermines its universality. They emphasize that the lower bound on the "equity premium"—a market statistic used in much of investment finance—is of limited value if the NCC is violated.

This special issue not only celebrates the monumental impact of the Black-Merton-Scholes model but also showcases how this seminal work continues to inspire and drive financial research and innovation. We are confident that these contributions will serve as a critical resource for scholars, practitioners, and policymakers, providing them with the tools and insights necessary to deal with the challenges in the global financial markets.