
The Derivatives Sourcebook

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The Derivatives Sourcebook

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Abstract

The Derivatives Sourcebook is a citation study and classification system that organizes the many strands of the derivatives literature and assigns each citation to a category. Over 1800 research articles are collected and organized into a simple web-based searchable database. We have also included the 1997 Nobel lectures of Robert Merton and Myron Scholes as a backdrop to this literature.

Publisher's Note

The Derivatives Sourcebook is a valuable bibliography of the literature for the derivatives research community – both academic and professional. We felt that the *Foundations and Trends* format, which allows for updating, would be ideal to keep this bibliographic effort alive and current. In addition, the classification provided by the authors and the links to the original articles gives the reader a tremendous reach into the research in this area and should make finding and accessing this research much easier.

We are grateful to the Nobel Foundation and Professors Robert C. Merton and Myron S. Scholes for allowing us to republish their Nobel lectures in this issue. While *FnT Finance* typically publishes review articles that are commissioned, written, and reviewed for the journal itself, we felt that there was no one better positioned to write such a survey and these lectures provide an historic perspective of this research topic.

We hope you find this bibliographic resource valuable, use it frequently, and help us keep it current by submitting any new references that appear in the literature. You can submit updates via our web site <www.nowpublishers.com> and look for “Update an FnT” on the homepage. Thank you.

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Introduction

One of the most important breakthroughs in modern finance is the pricing and hedging of derivative securities. By now, the fascinating history of the derivatives pricing literature is well known, having been chronicled by a number of authors including Bernstein (1992), MacKenzie (2006), Mehrling (2005), and Fischer Black himself (1989). Indeed, the remarkable twists and turns leading up to the publication of Black and Scholes (1973) and Merton (1973) is no less gripping than the story of the discovery of the structure of DNA as told by James Watson (1968) in *The Double Helix*.

But the intellectual lineage of the derivatives literature has received somewhat less attention, partly because bibliographies are simply not that exciting, but also because this literature has spread so widely and so fast. We conjecture that, in the modern history of all the social sciences, no other idea has had a bigger impact on theory and practice in such a short period of time. In academia, the impact of Black-Scholes and Merton has been profound – their papers have led to new insights into the dynamic structure of real and financial asset markets, the nature of intertemporal risks and hedging activity, macroeconomic risk exposures, and the value of flexibility in a variety of economic and,

2 *Introduction*

in a few cases, non-economic contexts. And in industry, the impact of Black-Scholes and Merton has been equally profound, becoming the standard references and theoretical underpinnings for at least three distinct businesses – the listed options markets, the OTC structured products market, and the burgeoning credit derivatives market. This breakneck pace of research and development and the many corresponding industrial innovations – recall that the Black-Scholes and Merton papers are not yet 35 years old – have left little time for reflection on the breadth and reach of their original publications. This was the original motivation for the Derivatives Sourcebook Project (DSP).

The DSP began in 1997 a few weeks before the Nobel Prize Award Ceremony in Stockholm. Initially intended as a citation study of the Black-Scholes and Merton papers, the DSP took on a life of its own. Encouraged and supported by Bob Merton, we created a classification system to organize the many strands of the derivatives literature, and assigned each citation to a category. Even a cursory glance at the many and varied categories should generate a certain degree of intellectual vertigo in any academic – the comparison to Helen of Troy, the face that launched a thousand ships, springs to mind. We have also placed these citations – over 1,800 research articles – into a simple web-based searchable database (<http://lfe.mit.edu/dsp/>) where researchers can search the derivatives literature by category, author, title, and other characteristics. The website will eventually allow users to submit updates to the database which we hope to incorporate periodically, so as to allow the DSP to evolve organically as the literature continues to develop.

Because this endeavor was prompted by the 1997 Nobel Prize, it seems only appropriate to include the Nobel lectures of Bob Merton and Myron Scholes here, and they are reprinted in their entirety in Sections 2 and 3, respectively. While much has happened since those lectures, they continue to provide a remarkably current and timely framework for this literature. In Section 4, we provide the classification codes and categories of the citations listed in Section 5. With many of the citations linked to the original articles in the online version, and the ability to update the citations database, we hope this will become a useful tool for academics and practitioners alike.

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