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BOOK REVIEWS

Mark Kritzman, Senior Editor

FISCHER BLACK AND THE REVOLUTIONARY IDEA OF FINANCE

By Perry Mehrling
(Reviewed by Mark Kritzman)

Fischer Black is regarded as one of the most creative thinkers in the history of financial economics, and this characterization comes through loud and clear in Perry Mehrling's captivating biography. What also comes through is the wide range of Black's scholarly contributions beyond the celebrated Black–Scholes formula.

On one level, Mehrling's book is a chronological documentation of Black's experiences, personal and professional, from his childhood, to his student days, to his collaboration with Jack Treynor at Arthur D. Little, to his university positions at Chicago and MIT, and to his final destination at Goldman Sachs. At another level, it is a mosaic of the financial and economic theories of an impressive list of economists presented in addition to Black's own theories on these topics. And at yet another level, this book is a description of a creative process unencumbered by artifice.

Three themes emerge from the story of Black's life. First is the profound influence of Jack Treynor on Black's intellectual development, which is best captured in Black's own words. In an open letter to Treynor published in the *Financial Analysts Journal* on the occasion of Treynor's retirement as editor in 1981, Black wrote:

You started me out in Finance and showed me the beauty of the way markets balance bulls and bears, speculators and investors. You taught me to look for buried treasure rather than surface nuggets in the unexplored wilds of research. You listened patiently to my random thoughts, and helped to make them less random. I cannot repay my debt to you.

Second is Black's nearly religious commitment to the CAPM. Indeed, his discovery of the Black–Scholes equation was by way of the CAPM as conceived by Treynor. And third, is Black's role as an outsider (his training was in mathematics and physics), which allowed him to explore problems from his unique perspective rather than from the extant economic orthodoxy. This explains the originality of many of his ideas. However, his position as outsider had a downside. He succeeded in alienating both the Keynesians and the Monetarists at the same time and therefore failed to find a receptive audience in the leading economics journals for much of his work in macroeconomics.

Ostensibly, this book is a biography of Fischer Black; yet Mehrling presents a broader history of several fields of economics and recounts the contributions of many of its stars, including Eugene Fama, Irving Fisher, Milton Friedman, Friedrich von Hayek, Michael Jensen, John Lintner, Robert Lucas, Robert Merton, Merton Miller, Fritz Machlup, Harry Markowitz, Franco Modigliani, Robert Mundell, Edward Prescott, Richard Roll, Paul Samuelson, Myron Scholes, Robert Solow, William Sharpe, and James Tobin among others. Remarkably, Black's contributions intersect with all of these luminaries, and Mehrling artfully shows the reader the connections. Moreover, he incorporates within Black's biography small biographies of several key players, especially Treynor.

For those interested in knowing who did what when, Mehrling parses the contributions of Sharpe, Lintner, and Treynor with respect to the CAPM, and Black, Scholes, Merton, Samuelson, and Sprenkle with respect to option pricing.

Having had the privilege to speak with Fischer Black on several occasions over a period of years, I totally concur with Mehrling's portrayal of Black as extraordinarily creative, unswayed by conventional wisdom, and completely without artifice. This is a terrific book, which can be read as a captivating biography or as an artfully crafted history of many of the key ideas of modern economics.

THE SOCIOLOGY OF FINANCIAL MARKETS

By Karin Knorr Cetina and Alex Preda
(Reviewed by Elizabeth Gorman)

The analysis of financial markets from a sociological point of view is a somewhat novel endeavor. Although the 19th-century founders of sociology viewed economic production and exchange as social behavior within their purview, most 20th-century sociologists conceded this intellectual turf to economists. Economists, for their part, left matters such as the family, education, and race relations to sociologists. Within the last 20 years, however, the boundaries separating all the social science disciplines have become more porous. While economists have applied rational-actor models to the family, sociologists have turned their attention to markets. Economic sociologists challenge the theoretical framework of neoclassical economics, in which atomized actors with perfect access to information act on the basis of rational calculation to maximize their utility. Sociologists argue instead that (1) actors' capacities for rational cognition are limited, and (2) actors are embedded in social institutions and networks of social relations that determine what information they receive, influence the meaning and weight that this information has for them, and constrain their opportunities for action. If there is any sphere of social life where the neoclassical assumptions might be said to hold, however, it is surely the financial marketplace. This volume, an edited collection of chapters by different authors, is an initial attempt to show that the social environment matters even there.

From the point of view of a financial practitioner, the most interesting chapters are probably those that investigate how the social context affects the decisionmaking of market participants. This line of inquiry is still very new, but it holds some promise for practical application in the future. For example, the chapter by Beunza and Stark explains how the physical and social organization of the New York trading floor of an international bank facilitated the development of successful arbitrage strategies. They point out that, in practice, arbitrage rarely involves the textbook example of a price discrepancy in different markets for what is clearly the same product. Because such discrepancies are obvious, they are quickly eliminated. Thus, arbitrage poses a cognitive challenge: to find undiscovered opportunities, arbitrageurs must be adept at recognizing similarities between ostensibly quite different securities. At the same time, they must control their exposure to the securities' irrelevant features. A nonhierarchical arrangement of trading desks in close physical proximity enables the sharing of information across desks that focus on different types of trades and different principles of evaluation. This meshing of different perspectives helps traders to perceive, and profit from, innovative patterns of similarity while avoiding pitfalls.

Whereas Beunza and Stark examine the social organization of a trading floor, MacKenzie uses the case of Long-Term Capital Management (LTCM) to analyze social processes across an entire market. MacKenzie argues that LTCM's high leverage explains its vulnerability to the events of August and September 1998, but not why those events took place—much as the fact that an airplane is in the air explains its vulnerability to a crash, but not why the crash occurs. He marshalls extensive interview evidence to support his claim that the success of LTCM led to widespread imitation of its trading strategies by other market participants, which in turn led to the creation of a "superportfolio" of partially overlapping arbitrage positions. When Russia defaulted on its debt, arbitrageurs carrying losses in the Russian market began liquidating positions elsewhere to meet the demands of their counterparties. Because so many other market players held so many of the same positions, spreads widened, in turn moving prices against other holders of the "superportfolio." According to economic theory, arbitrage capital should have moved in to exploit this situation and cause spreads to converge. Instead, investors panicked, leading to a cascade of self-reinforcing adverse price movements. Thus, MacKenzie contends that, the social process of imitation played a crucial role in amplifying the effects of the crisis.

Abolafia's chapter focuses on one particularly important market player—the Federal Reserve. Before banks and securities firms can interpret the Fed's reports and announcements, the Fed itself must interpret—make sense of—the mass of economic information it receives. How information is interpreted, or "framed," inevitably has consequences for different parties' material and reputational interests, however. As a result, interpretation is often a contested process, especially when it involves the abandonment of a well-established way of thinking in favor of a new one. Abolafia analyzes transcripts of meetings of the Federal Open Market Committee in 1982 to show how reframing was accomplished through social interaction to bring about a major policy change: the move from a monetary target (M1) to an interest rate target. Abolafia takes us step by step through the sequence of moves in which then-Chairman Volcker initiates the process and committee members question Volcker's interpretation of the situation, debate the new frame, reach consensus, and consider how to present the change to the public. The article is almost a "how-to" manual for those who would like to bring about policy change in their own financial organizations.

Other chapters of the book cover a mixed bag of topics. Some seemed aimed at a nonfinancial audience and primarily describe the workings of financial markets or the history of recent events such as Eliot Spitzer's investigation of conflicts of interest among Wall Street securities analysts. Others seek to interpret the experience and activities of traders and investors in cultural terms. The chapter by Sassen asks why financial market activities are increasingly located in a few major cities, despite the advent of information technology that should permit market participation from anywhere. She argues that as factual information has become more widely accessible, inferences and interpretations by talented and experienced people become ever more important—and such people are clustered in only a few locations. Two chapters examine the impact of institutional investors on corporations, arguing that they tend to bring about horizontal and vertical acquisitions and boards of directors that are tightly interlocked with those of other corporations.

The quality of the chapters is uneven, and the diversity of the authors' approaches gives the volume a somewhat disjointed feel. However, the best chapters make a good case for the importance of studying the causes and consequences of the social organization of financial markets. Let us hope that this book is just a start, and that even more valuable and interesting work will follow in the future.