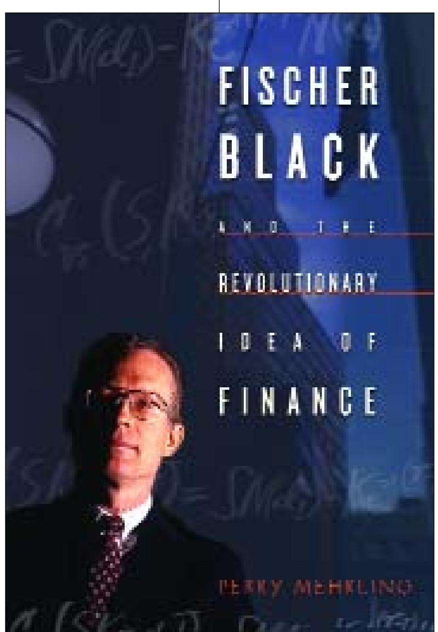
By Aaron Brown

Fischer Black and the Revolutionary Idea of Finance

Author: Perry Mehrling
Publisher: John Wiley & Sons **ISBN:** 0471457329

This critique was written by **Aaron Brown,** a GRR editorial board member and a vice president at Morgan Stanley who spends the majority of his working hours converting risk models and systems to Basel II standards. Brown also interviewed Perry Mehrling, the Columbia University professor who authored *Fischer Black.* (See "A Conversation with Perry Mehrling," pg. 11.)

Perry Mehrling is professor of economics at Barnard College of Columbia University. His first book, *The Money Interest and the Public Interest,* explained the evolution of American monetary thought from 1920 to 1970, via intellectual biographies of Allyn Young, Alvin Hansen and Ed Shaw. *Fischer Black and the Revolutionary Idea of Finance* is superficially a similar book, tracing the evolution of modern finance and presenting an intellectual biography of Black. It does an exceptional job of capturing Black's spirit and gives an insightful inside account of the academic financial revolution.



Fischer Black will always be best known for his part in developing the Black-Scholes-Merton option pricing formula. His name is also attached to other major achievements: the Black-Derman-Toy and Black-Karasinski models of interest rates, the Black Zero Beta Capital Asset Pricing Model and the Black-Litterman portfolio allocation. He wrote beautiful papers in almost every field of finance and often poached on the turf of economists.

He spent the last decade of his career, from 1984 until his untimely death in 1995, at Goldman Sachs. At Goldman, he became a hero to finance professors, not because he made a lot of money (other professors made much more), but because he didn't go native. He persisted in the geeky kinds of things finance professors are known for: confiscating any book he found on technical analysis, making bets with traders over probability questions, insisting all trading screens be redesigned with no abbreviations, graphics or trailing zeros. He had always dressed like an investment banker, but Goldman salespeople found out quickly that he didn't speak, think or act like one.

One of my least pleasant memories of graduate school at the University of Chicago was studying for my finance preliminary examination. There seemed to be precious little finance involved; mostly it consisted of memorizing hair-splitting distinctions among different models. There must have been 50 different versions of the Capital Asset Pricing Model (CAPM) alone.

The only reason this was possible at all is that almost all the originators either taught at Chicago or visited frequently. The few exceptions were accessible with a little effort. That meant I could attach a personality to a paper as a memory aid. I'm sorry to say that this is an accurate reflection of my appreciation at the time for meeting the founders of modern finance.

Shedding Light on Pioneers

Since it is hard for students today to understand how little interest there was in the field before the 1980s quant revolution on Wall Street, one useful result of Professor Mehrling's work will be to humanize most of the pioneers of modern finance.

Time has coalesced pre-1980 finance work into a con-

"Black's papers are such wonderful gems that it was easy to imagine him a fascinating conversationalist. He wasn't. But he made deeper contributions to the world than is commonly known and he had a full life of human relationships — just not with a lot of people at once or with people he didn't know very well."

sensus. Fierce disputes have mellowed as different approaches have turned out to be consistent or special cases of more general principles. The tremendous success of the field as a whole means there is plenty of reward to satisfy everyone and that there is no need to fight over who did what first or best.

It is easy for today's students to view the entire generation of finance researchers as a homogenous team, working harmoniously toward a common goal. But *Fischer Black and the Revolutionary Idea of Finance* corrects this misperception. Using Black as a central reference, it traces the interactions among researchers and the often erratic progress of their work. This is not a traditional biography. We get multi-page sketches of the careers of Black's colleagues, barely learn the names of his wives and children and meet almost no friends outside of his profession.

Despite the unusual emphasis, a compelling picture of Black emerges. I met him only a few times, but I think my perceptions were shared by many others who did not give much thought to the man. On the plus side, he was extraordinarily accessible, obviously brilliant and verbally polite. But he also seemed very cold and could be extremely irritating.

A friend of mine described him as a guy who could "hang up the phone on you when you were talking in person." Black seemed to lose interest if you said something outside a narrow interest, and when he lost interest, he stopped listening or replying. In meetings, he could make provocative statements and ignore the responses. He was famously eccentric in many small and not-so-small ways, and some people said that he didn't do anything at Goldman Sachs except sit in his office organizing and reorganizing his file of ideas.

The book presents a much richer, more generous and more human picture of Black. After reading it, I see that some of my negative reaction to him in person sprang from unrealistic expectations. Black's papers are such wonderful gems that it was easy to imagine him a fascinating conversationalist. He wasn't. But he made deeper contributions to the world than is commonly known and he had a full life of human relationships — just not with a lot of people at once or with people he didn't know very well.

Mehrling has done a remarkable job of capturing a pioneering genius who was not obviously sympathetic. Black's era and colleagues are captured as well. But mostly this is a story of ideas — not of people or eras. It is the ideas that shine though in this wonderful book, and they are the best reason to read it. **> > >**

A Conversation with Perry Mehrling

Aaron Brown (AB): *Compared to typical biographies, your book devotes relatively little attention to Fischer Black's life beyond his professional activities. Was it your choice as an author to emphasize the revolutionary idea of finance, or was an intellectual biography the most appropriate way to document Fischer Black's life?*

Perry Mehrling (PM): I think there are two answers. One is the one I'm interested in, which is the history of ideas. So I got interested in Fischer not as a man, but for the ideas, the writing that he had done. But there is also the second reason, that he was a man of ideas. That was the essence of him — the most important part of him.

AB: *Does this mean that the book changed shape and emphasis as you worked?*

PM: Yes, it did. … Seven years ago, I wasn't sure it was even going to be a book. It was going to be about monetary theory. Then I wrapped around that the story of modern finance. Then I wrapped around that the personal story.

A Conversation with Perry Mehrling *(continued)*

AB: *So you started out with an economics journal article on monetary history? How did you get redirected to a biography of Fischer Black?*

PM: Well, I contacted the family pretty early on, because I had to get access to the papers at MIT [and] Fischer had, like, 50 boxes. His daughter Alethea was very helpful, and his parents as well. I went down to visit them in Tampa. The family has been very supportive throughout because they asked themselves "what would Fischer have wanted us to do?" And Fischer would have said, "let the chips fall where they may."

Perry Mehrling

AB: *The most impressive aspect of Fischer Black's work is its thoroughness and breadth. He contributed major papers to almost every field of finance, and beyond. But his papers often seem to be standalone gems. They redefine the question, then provide definitive answers. He rarely followed them up, and, while the papers were unquestionably influential, they did not inspire direct follow-on work nor create a group of followers. Would you agree with that, and, if so, was it due to his intellectual personality or was it a defect in the field that finance did not appreciate him enough?*

PM: They didn't get followed up in the normal way, but I don't know that it's true that they didn't get followed up at all. You're quite right about the range and breadth and the depth of his thinking. The articles are very unusual in the way they are written, in the accessibility or the apparent accessibility. They're usually much deeper than they appear. They look like you can read them without too much background knowledge, and you can, you can get something out of them. But you can read them with great benefit even with a huge amount of background knowledge. And he wrote specifically for that: he worked very hard at the craft of writing so his articles could be read at all levels.

In terms of influence, he specifically chose to write in Financial Analysts Journal, because he thought he would reach a wider audience that way than if he were to write in more academic journals, in the academic style. In the academic style, you cite all the people who have gone before you, so it's easier to trace the influence. If you write in *Financial Analysts Journal,* you change the way people behave — but they don't necessarily cite you [and] they don't necessarily even remember where they learned what they are doing. That's what he was interested in: changing the way people behave, not getting cited. And I think he did.

AB: *Colleagues of Fischer Black's generation often did more than think and write. Some started successful businesses; others trained generations of students, or took prominent parts in public policy debates or wrote major textbooks. Was Fischer Black just more purely intellectual than these people, or was there some flaw that kept him from realizing his full potential?*

PM: Full potential? You have an image of what people should be doing. I think he did exactly what his full potential was. He was a terrible businessman. It's just his character that he wasn't good at managing other people. He was very much at home in the world of ideas, much less at home in the practical world. He had no regrets. He was at his best inside a large institution, inside a university, inside a department. ... Behind the scenes.

AB: *How about students?*

PM: I don't think he was particularly interested in that. Part of this might be happenstance. Remember he was at Chicago for only four years, and then he was at MIT for 10 years. MIT was at that time a very small department. They had very few PhD students, mostly MBAs, different from Chicago in that regard. So the opportunity may not have been there. He wasn't looking to reproduce himself. He was interested in learning. He wasn't a terribly good teacher; he wasn't much interested in it.

AB: *But others at MIT were.*

PM: Certainly that's right. Stu Myers and Bob Merton. They certainly are known figures; they wrote textbooks. I think that's the bigger question: Why don't we associate Fischer with a bigger work? He never created a textbook. There's no Fischer Black school. I think he would be happy with that. I think he was always moving on to the next problem. ■