Reviews of *The Myth of the Rational Market* by Justin Fox

Introduction

Justin Fox has written an elegant and insightful book, "The Myth of the Rational Market," that thoroughly documents a half century of confusion and misinformation about the behavioral underpinnings of the U.S. stock market. No less an authority than the late Peter Bernstein observed: "This wise and witty book is must reading for anyone who wonders what makes financial markets tick. Even those who have wrestled with this question for years will be glad to have read Fox's compelling history." *Barrons* referred to it as "A lucid, lively and learned account," while *The Economist* praised it as "An intellectual tour-de-force..."

Our own view is that the book lives up to its title and makes the case for John Keynes' and Benjamin Graham's perspective that the stock market is often highly irrational--driven as it is by the emotions of hope, fear and greed in the face of chronic uncertainty. Or as Graham once starkly phrased it: "The stock exchanges appear to me chiefly as a John Bunyon type of Vanity Fair, or a Falstaffian joke, that frequently degenerates into a madhouse – a tale of sound and fury signifying nothing."

Shown on the pages below are two book reviews that thoroughly discuss the lucid approach Fox has taken to his subject. The first is by Roger Lowenstein that appeared in The Washington Post and the second is by Paul Krugman from The New York Times Book Review.

(Parenthetically, for an excellent discussion about irrationality in the stock market, one can also turn to Chapter 2, "Too Much Speculation, Not Enough Investment," in John Bogle's admirable new book, "Enough.")

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THE MYTH OF THE RATIONAL MARKET By Justin Fox
A History of Risk, Reward, and Delusion on Wall Street
By Roger Lowenstein – The Washington Post – June 7, 2009

The upside of the current Great Recession is that it could drive a stake through the heart of the academic nostrum known as the efficient-market hypothesis. This theory holds that stock and bond markets are nearly perfect -- even during such crazes as the dot-com mania -- and that prices on the exchanges instantly and accurately reflect the available information about publicly traded securities. After the market crash of 1987, Yale University economist Robert Shiller called that belief "the most remarkable error in the history of economic theory." He could have said "most harmful error" as well. Yet it lived on and contributed mightily to the mortgage bust.

One presumes from the title of Justin Fox's "The Myth of the Rational Market" that he has come to bury, not to praise. And certainly, the opportunity for such an undertaking is rich. Proceeding from the assumption that economic actors are unerringly rational, the theory's disciples have endowed market prices with the wisdom of every moment. Thus, at 2 p.m. on a Wednesday, the Dow Jones Industrial Average reflects the accumulated financial knowledge of civilization, and equally so at 2 on Thursday -- even if the market has moved hundreds of points in the interim.

How did this faith in the supremacy of market group-think do us harm? For one, as the dot-com and other manias demonstrated, the crowd occasionally gets it wrong. The mistaken faith in markets turned regulators into fawning groupies. Notably, former Fed chairman Alan Greenspan doubted that he or anyone else could detect -- or regulate -- a bubble in advance.

The power of the doctrine was its grand design: the comforting notion that the financial universe adhered to absolute laws. But that was also its flaw. Prices couldn't be wrong; if they were, someone would seek to profit from the error and correct it. The illustrative joke was of two economists who spot a $10 bill on the ground. One stoops to pick it up, whereupon the other interjects, "Don't. If it were really $10, it wouldn't be there anymore."

Theorists such as Eugene Fama decreed that if prices are unforeseeable, then the future direction of the market is random. And if the market is truly random, prices should follow what mathematicians call a bell-curve distribution. In nature, this works. We don't know whether your neighbor will be tall or short, but we can predict, with pretty close approximation, how many very tall people will live in your town. In nature, extreme results such as a village of seven-footers will never occur.

Fox tells the story of how financial engineers assumed that markets would behave the same way, with generally predictable variances in prices. In particular, the theory of option pricing, the cornerstone of modern finance, has built into it the assumption that prices are random. The theory was devised by Fischer Black, Myron Scholes and Robert Merton. The last two won the Nobel Prize in 1997 and were partners in Long-Term Capital Management, the hedge fund that blew up in 1998.

What happened to LTCM? It turned out that in financial markets, extreme events do happen. People get emotional and decide to buy (or sell) in unison. All of LTCM's trades went sour simultaneously. Nonetheless, the modelers kept at it. Rating agencies assumed that subprime mortgagees would behave in random fashion -- large numbers of people would never default at the same time, right? (Oops.)

Fox, a business columnist for Time, spins a fascinating historical narrative, beginning with economist Irving Fisher's paean to markets in, alas, 1929. Postwar economists such as Paul Samuelson noticed that most investment pros do not beat the averages. This led to the one positive contribution of the efficient-market hypothesis: Jack Bogle's invention of

index funds, which mimic the performance of the stock market as a whole and keep ordinary people from wasting their money trying to beat it.

Fox recognizes that true believers in the market's efficiency suffered from a "blinkered" mindset and "tunnel vision." Yet I think he lets them off too easily. He laments (as if it were necessary) the lack of any alternative "grand new theory" and finds that the debate has resulted in a "muddle." Fox concludes, "If you do come up with an idea for beating the market, you need a model that explains why everybody else isn't already doing the same thing." Not necessarily. Markets aren't physics. Maybe no one model explains them.

The emerging school of behavioral finance fills in many of the gaps left by the efficient marketers. Behavioral finance, which Fox discusses at length, holds that financial man -- far from the perfect, mechanical trader depicted in textbooks -- is a rather neurotic fellow. He follows the crowd, fails to plan ahead and often makes mistakes. To think that his every price is perfect is a remarkable error indeed. [Emphasis added]

Roger Lowenstein is the author of "While America Aged." His next book, "The End of Wall Street," will be published in 2010.

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THE MYTH OF THE RATIONAL MARKET
A History of Risk, Reward, and Delusion on Wall Street by Justin Fox

THE SAGES
Warren Buffett, George Soros, Paul Volcker, and the Maelstrom of Markets by Charles R. Morris

Reviewed by Paul Krugman in The New York Times Book Review – August 9, 2009

Last October, Alan Greenspan — who had spent years assuring investors that all was well with the American financial system — declared himself to be in a state of “shocked disbelief.” After all, the best and brightest had assured him our financial system was sound: “In recent decades, a vast risk management and pricing system has evolved, combining the best insights of mathematicians and finance experts supported by major advances in computer and communications technology. . . . The whole intellectual edifice, however, collapsed in the summer of last year.”

Justin Fox’s “Myth of the Rational Market” brilliantly tells the story of how that edifice was built — and why so few were willing to acknowledge that it was a house built on sand.

Do we really need yet another book about the financial crisis? Yes, we do — because this one is different. Instead of focusing on the errors and abuses of the bankers, Fox, the business and economics columnist for Time magazine, tells the story of the professors who enabled those abuses under the banner of the financial theory known as the efficient-market hypothesis. Fox's book is not an idle exercise in intellectual history, which makes it a must-read for anyone who wants to understand the mess we're in. Wall Street bought the ideas of the efficient-market theorists, in many cases literally: professors were lavishly paid to design complex financial strategies. And these strategies played a crucial role in the catastrophe that has now overtaken the world economy.

This journey to disaster began with a beautiful idea. Until 1952, finance theory, such as it was, consisted of a set of wise observations and rules of thumb, without any overarching framework. But in that year Harry Markowitz, a graduate student at the University of Chicago, gave finance theory a new, hard-edged clarity by equating the concept of risk — previously a vague term for potential losses — with the mathematical concept of variance.

Markowitz's model told investors what they should do, rather than predicting what they actually do. But by the mid-1960s other theorists had taken the next step, analyzing financial markets on the assumption that investors actually behaved the way Markowitz's model said they should. The result was an intellectually elegant theory of stock prices — the so-called Capital Asset Pricing Model, or CAPM. CAPM is a deeply seductive theory, and it's hard to overemphasize how thoroughly it took over thinking about finance, not just in business schools but on Wall Street.

Markowitz would eventually share a Nobel in economic science with William Sharpe, who played a key role in developing CAPM, and Merton Miller, another central figure in the development of modern financial theory. Long before then, however, the innovative idea had hardened into a dogma.

One of the great things about Fox's writing is that he brings to it a real understanding of the sociology of the academic world. Above all, he gets the way in which one's career, reputation, even sense of self-worth can end up being defined by a particular intellectual approach, so that supporters of the approach start to resemble fervent political activists — or members of a cult. In the case of finance theory, it happened especially fast: by the early 1960s Miller began a class at the University of Chicago's business school by drawing a line down the middle of the blackboard. On one side he wrote M&M, for "Modigliani-Miller" — that is, the new, mathematicized, CAPM approach to finance. On the other he wrote T — for "Them," meaning the old, informal approach.

In this sense, efficient-market acolytes were like any other academic movement. But unlike, say, deconstructionist literary theorists, finance professors had an enormous impact on the business world — and, not incidentally, some of them made a lot of money in the process.

This may seem strange, since <u>CAPM and the broader work it inspired were based on the assumption that investors make mathematically optimal investment decisions with the</u>

information at their disposal. As a result, Eugene Fama, of Chicago's business school, wrote, "actual market prices are, on the basis of all available information, best estimates of intrinsic values." Fama called a market with this virtue an "efficient market" — and argued that the data showed that real-world financial markets are, in fact, efficient, or very nearly so. But if the markets are already getting it right, who needs finance professors?

In fact, however, Wall Street was eager to hire "rocket scientists," especially after Fischer Black and Myron Scholes, working at M.I.T.'s Sloan School, came up with a formula that seemingly solved the puzzle of how to value options — contracts that give investors the right to buy or sell assets at predetermined prices. The quintessential collaboration between big money and academic superstars was the hedge fund Long-Term Capital Management, whose partners included Scholes and Robert Merton, with whom Scholes shared another finance Nobel. L.T.C.M. eventually imploded, nearly taking the world economy down with it. But efficient-markets theory retained its hold on financial thought.

All along, there were critical voices. Robert Shiller, who has become famous for predicting both the Internet crash and the housing bust, first made his mark by casting statistical doubt on the evidence for efficient markets. Lawrence Summers, now a senior official in the Obama administration, began a paper on financial markets thus: "THERE ARE IDIOTS. Look around." And a whole counter-culture emerged in the form of "behavioral finance," which argued that investors are irrational in predictable ways. But the sheer scope and sweep of the efficient markets hypothesis — not to mention the fact that so many people devoted their careers to it — allowed it to brush off most of these challenges.

Of course, there have always been men of affairs wise enough to see past the current dogma. In "The Sages," Charles R. Morris profiles three of them: George Soros, Warren Buffett and Paul Volcker.

Morris, the author of "The Trillion Dollar Meltdown," doesn't have much patience with economic theory, and it shows; I almost gave up on the book after Morris managed, in the space of just a few pages, to thoroughly misrepresent the ideas of both John Maynard Keynes and Milton Friedman. But the book comes to life with its personal profiles, especially the surprisingly endearing portrait of Warren Buffett as a young man.

Do the lives of the sages carry useful lessons for the rest of us? Soros doesn't really seem to have a method, except that of being smarter than anyone else. Buffett does have a method — figure out what a company is really worth, and buy it if you can get it cheap — but it's not a method that would work for anyone without his gifts. And Volcker's main asset is his implacable integrity, which most mortals would find hard to match.

Indeed, I came away from reading these books wondering if their shared under-lying premise — that the current crisis will put an end to Panglossian views of financial markets — is right. Fox points out that academic belief in the perfection of financial markets survived the 1987 stock market crash and the bursting of the Internet bubble.

Why should the reaction to the latest catastrophe be any different? In fact, what I hear from my finance professor friends is that there's a lot less soul-searching under way than you might expect. And Wall Street's appetite for complex strategies that sound clever — and can be sold to credulous investors — survived L.T.C.M.'s debacle; why can't it survive this crisis, too?

My guess is that the myth of the rational market — a myth that is beautiful, comforting and, above all, lucrative — isn't going away anytime soon. [Emphasis added]

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