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BOOK REVIEW

Mark Kritzman, Senior Editor

ADAPTIVE MARKETS: *FINANCIAL EVOLUTION AT THE SPEED OF THOUGHT*

Andrew W. Lo
(*Reviewed by Savannah Smith*)

In a unique display of bravery and eloquence, Andrew Lo has managed to make a strong case against one of the most widely taught theories on market behavior without any exhausting equations in his newest book *Adaptive Markets: Financial Evolution at the Speed of Thought*. Though he is not the first to challenge the Efficient Markets Hypothesis, he may be the first to reference the Red Sox, a severed arm, and sea turtles while doing so. Of course, as a New Englander, I am biased in thinking that any Red Sox reference is a good thing. Lo presents his Adaptive Markets Hypothesis as a new way of thinking about financial markets and human behavior, stating that the traditional investment framework is not so much incorrect as it is incomplete.

The Adaptive Markets Hypothesis is rooted in the fundamental motives that drive human decision making. We act in our own self-interest, we make mistakes. We adapt. Rather than comparing market behavior to physics, as many economists tend to do, Lo makes the case that the market behavior is more similar to biology and evolution. Fear, the brain's way of alerting you of danger, makes us irrational—or, in investing, irrationally averse to loss. We are more likely to take risks to avoid losses than we are to take risks in hopes of a higher payoff. In Lo's words, "a thorn in the hand is worth much less than the possibility of many thorns in the bush if that possibility also includes a chance of avoiding thorns altogether." By acknowledging inefficiencies in the market and applying what we know about biology and evolution, we can gain a greater understanding of market behavior and better prepare ourselves for instable environments. In essence, Lo proposes that we humanize the financial system.

This book is a display of bravery not only for the argument it makes, but for the personal anecdotes and experiences it provides in support of the argument. Lo recalls his first time presenting at the annual conference hosted by the National Bureau of Economic Research, which, in laymen's terms, is an economist's version of the debutante's coming-out party; he explores the Pygmalion effect in a fond memory of his third grade teacher; he demonstrates the concept of heuristics through his thought process while getting dressed in the morning. In a genre that is so frequently void of intimacy, Lo gracefully connects the reader to his own experience which not only makes the journey more enjoyable, but provides a deeper understanding of how he arrived at his destination (the Adaptive Markets Hypothesis).

Of course, a hypothesis is just an idea without evidence. In chapter eight, Lo supports his theory by addressing the principles of the traditional investment paradigm from the new perspective of Adaptive Markets. He then investigates the "Quant Meltdown of 2007" through this perspective, revealing discoveries on liquidity and desperation along the way. This provides a smooth transition into a broader discussion on financial crises in chapter nine, where Lo states that in the financial crisis of 2008, "greed overwhelmed fear." The book is not all based in history though, as he continues to describe the framework for "fixing finance" based in the Adaptive Markets Hypothesis. He stresses the importance of competence and modesty in financial management, as well as privacy and transparency (which is surprisingly not a contradiction). By considering human nature and regarding the financial system more like an ecosystem than a mechanical system and regulate it as such, Lo claims that we can build a more resilient environment.

Lo manages to end his book on an optimistic note (while referencing Star Trek, no less). He imagines the ways in which his hypothesis could impact developments not only in finance and financial technology, but in artificial intelligence and biomedicine as well. He challenges the cliché of the greedy wolf so often referenced in discussions about people in finance, and reminds us of motives even greater than avarice: "we're motivated by fear and greed, but also by a sense of fairness, and perhaps most important, by our imaginations."

A feat in itself, this extensive book manages to educate the reader on not only finance, but neuroscience, psychology, evolution, technology, transportation, and, briefly, ancient Egyptian language. Though at times the necessity of such mentions may be questionable, the result is a truly entertaining experience. *Adaptive Markets: Financial Evolution at the Speed of Thought* is a great read for anyone who is looking to learn about market behavior and somehow smile at the same time.