A Nobel for the Random Walk of Stock Prices

By David R. Henderson

Sometimes the Nobel committee seems to make a partly political statement in choosing winners of the prize in economics. Not this year. On Monday, the Royal Swedish Academy of Sciences awarded the 2013 Nobel to three deserving American economists: Eugene Fama and Lars Peter Hansen at the University of Chicago and Robert Shiller of Yale University. The prizes were based on the importance of their work, which "laid the foundation for the current understanding of asset prices."

Mr. Fama's major contribution, notably with the 1965 paper "Random Walks in Stock Market Prices," has been to show that stock markets are very efficient. The term "efficient" here does not mean what it normally means in economics—namely, that benefits minus costs are maximized. Instead, it means that prices of stocks rapidly incorporate information that is publicly available.

That happens because markets are so competitive. Prices now move on earnings news not just within seconds, but within milliseconds—which is why you're already too late if you decide to buy Apple stock after hearing about an unexpectedly high earnings report. There are quicker trigger fingers acting instantly on new information. But even before supercomputers got into the game, markets were reacting very efficiently.

One implication of market efficiency is that trading rules, such as "buy when the price fell yesterday," don't work. The insight has had big implications for large and small investors: Don't waste your money on professional financial managers who actively try to pick individual stocks.

One high-profile beneficiary of Mr. Fama's insight was John Bogle, who started the Vanguard 500 Index Fund in the 1970s. His idea was to have a fund indexed to the overall market and save the costs of hiring experts to predict stock prices. He shared Mr. Fama's skepticism about golden stock-pickers. The result is that over the past four decades millions of investors who buy index funds from Vanguard and its competitors have saved hundreds of billions of dollars by not paying for dubious investment advice.

Mr. Fama, 74, is also skeptical of the word "bubble," which suggests market *in*efficiency by letting stock prices rise higher than justified by market fundamentals. In 2010, he told the New Yorker magazine: "It's easy to say prices went down, it must have been a bubble, after the fact. I think most bubbles are twenty-twenty hindsight. . . . People are always saying that prices are too high. When they turn out to be right, we anoint them. When they turn out to be wrong we ignore them."

In the Milton Friedman University of Chicago tradition, Mr. Fama believes that free markets are better than government at allocating resources. He strongly opposed the 2008 selective bailout of Wall Street firms, arguing that, without it, financial markets would have sorted themselves out within "a week or two."

The latest winners of the economics prize taught us about market efficiency in pricing assets.

Robert Shiller's contribution to our understanding of asset prices has included this insight: that stock prices fluctuate more than can be explained by fluctuations in dividends. The 67-year-old Mr. Shiller's finding in the 1980s set off a revolution in finance. It is now accepted that high prices relative to earnings signal low subsequent returns and vice-versa. This means, as George Mason University economist Tyler Cowen has noted, that (contra Mr. Fama) a very patient investor should be able to beat the market by betting against short-term market movements. So, for example, if the price has fallen more than can be explained by relatively steady dividends, you should buy and hold.

Mr. Shiller's work has been particularly notable for two reasons: his contribution to the Case-Shiller home price index, which has been invaluable for those who want good data on home prices both nationally and regionally; and his proposal that government pensions and entitlements be "indexed to some indicator of taxpayer ability to pay, such as GDP." Thus government payments for pensions and entitlements such as Social Security and Medicare would be tethered to the relative health of the nation's economy, and the government wouldn't, as it does now, continue to spend itself ruinously into debt. Mr. Shiller's young students—given that they're of the generation likely to be surrendering more and more of their income to the government to support its payments—should consider building a statue of him.

The third recipient of the Nobel economics prize, Lars Peter Hansen, 60, earned it for the mathematical techniques he developed that apply to stock prices and other economic models. Here's how John H. Cochrane, a University of Chicago colleague of Mr. Hansen's, put it to me in an interview: "Hansen managed to boil all the complex statistical techniques used in understanding economic models to just taking averages. His techniques allowed economists to study the economy one piece at a time, and to focus on the robust, important predictions of a model without being distracted by irrelevant sideshows."

As the Nobel committee wrote: "Understanding how mispricing of assets emerges, and when and why financial markets do not efficiently reflect available information, is one of the most important tasks for future research." Messrs. Fama, Shiller and Hansen opened the door, with implications that extend far beyond Wall Street.

Mr. Henderson is a research fellow with Stanford University's Hoover Institution and an economics professor at the Naval Postgraduate School.

OPINION

LETTERS TO THE EDITOR

Eugene Fama and Efficient Financial Market Theory

David Henderson's "A Nobel for the Random Walk of Stock Prices" (op-ed, Oct. 15) describes me as "one high-profile beneficiary of Mr. Fama's insight," allegedly inspiring my founding of the Vanguard 500 Index Fund in 1975.

This is untrue. Perhaps to my shame, I didn't even learn of Eugene Fama's "efficient market hypothesis" (EMH) until a decade after my creation of the 500 Index Fund. Rather, I was inspired by another Nobel laureate, economist Paul Samuelson, who in his 1974 essay in the Journal of Portfolio Management demanded "brute evidence" that active money managers could beat the market index. Such evidence has yet to be produced.

Numbers-crunching economists like Mr. Fama represent the "quantitative school" of indexing who came to believe in stock-market efficiency. In fact, he inspired the founding of Dimensional Fund Advisors (DFA), which follows, not an indexing strategy, but a strategy based on persistent undervaluations of various market segments. Mr. Fama continues to serve on the DFA board.

The "pragmatic school" of indexing, on the other hand, simply amassed vast statistical evidence showing that the returns earned by active managers seldom outpace the S&P 500 Index. Further analysis showed that the failure of active fund managers was a result of the costs they incurred. The average manager is average, but only before all these fund operating expenses, advisory fees, turnover costs and sales loads. After those costs, active management becomes a loser's game. It is the "cost matters hypothesis" (CMH) that assures that investors in low-cost index funds win the battle for superior returns.

Ironically, another 2013 Nobel laureate, Robert Shiller, has dismissed the entire EMH as "one of the most remarkable errors in the history of economic thought." That sweeping denial goes much too far. In the long run, stocks are usually priced quite efficiently. But in the short run, prices can be wildly inefficient. The problem is that we never can be sure when the stock market is efficiently priced and when it is not. The CMH, on the other hand, must be, and is precisely accurate (for investors as a group) by the minute, by the hour, by the year, even by the century.

Prof. Fama's contribution to the understanding of how financial markets work has become a vital part of the study of economics, and I salute him for his Nobel. But it was the first U.S. economics Nobel laureate, Paul Samuelson, who was the moving force that inspired my creation of the first index mutual fund.

JOHN C. BOGLE
Valley Forge, Pa.

Mr. Bogle founded the Vanguard Group.