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Nobel Prize Shows Both Wisdom and Madness of Crowds

By Richard Holden and Justin Wolfers - Oct 14, 2013

Financial markets provide a useful reminder of just how humble we economists should be about our understanding of the world. The three [winners](#) of the 2013 Nobel Memorial Prize in Economic Sciences neatly capture this tension.

[Eugene Fama](#) is the intellectual godfather of the [view](#) that financial markets are efficient, while no one has done more than [Robert Shiller](#) to highlight their inefficiencies. [Lars Peter Hansen](#) developed statistical [techniques](#) that both sides have used to help resolve their differences.

The central issue is whether the prices of stocks, bonds and other financial assets reflect the workings of a well-functioning market. That is, do financial prices reflect the wisdom of crowds, or do they mirror popular delusions? The answer determines whether you should try to beat the stock market, whether the Federal Reserve should respond to rising housing prices, and how the U.S. should regulate financial markets.

Tests of market efficiency revolve around the question of whether future movements in stock, bond and housing prices are predictable. The basic logic is that prices in an efficient market already reflect all available information, so there shouldn't be any existing information that can predict how they will change in the future.

Well, mostly. All economists believe that investors should demand higher returns for taking on more risk, and so the question is whether risk-adjusted price changes are predictable.

Consistent Evidence

Stock-pickers around the world can attest that predicting price changes is difficult. Equally, with enough persistence, one can usually ferret out a few accurate predictions. Indeed, all three laureates have accumulated evidence consistent with the idea that stock-price movements are somewhat predictable. The real debate, then, is how to interpret this predictability.

In Fama's telling, a stock price reflects the wisdom of crowds. Yes, there is evidence that sometimes share-price movements are predictable, but they are small and largely reflect compensation for

greater risk.

Fama's systematic studies of the performance of different stocks over time have revealed clear evidence that price changes are predictable. In particular, he and collaborator [Kenneth French](#) have shown that stocks of small companies and of those with high book-to-market values have historically yielded higher returns. Fama argues that this predictability isn't evidence against market efficiency, rather that these are proxies for a stock's riskiness. To him, these higher returns are simply a rational response to greater risk.

This perspective has had an important effect on the stock-picking community, where analysts are evaluated on the performance of their picks relative to the benchmarks that account for these risk factors.

Fama was also an early architect of financial "event studies," compiling an impressive body of evidence showing that markets respond rapidly to new information. Even so, the observation that markets react quickly doesn't mean that they are responding fully, or even rationally.

An important implication of the Fama view is that stock picking is a futile exercise. Investors who want to own stocks should instead buy low-cost index funds. This observation has led to an entire industry of such funds being created.

While Fama tended to focus on short-term changes in individual prices, Shiller [focused](#) on the bigger picture of asset prices -- and over a longer term. And while Fama's account of stock-price predictability emphasizes risk, Shiller puts human psychology at center stage.

Volatility's Role

Shiller has shown that stock prices are far too volatile to be consistent with market efficiency. The logic is simple: Because a stock is an entitlement to a company's future dividends, a stock price should only fluctuate as the value of future dividends rises and falls. However, as any market-watcher knows, stock prices are incredibly volatile, even as dividends tend to be stable. The juxtaposition of these facts suggests that something beyond fundamentals drives stock fluctuations.

In Shiller's telling, markets can be subject to extraordinary popular delusions and the madness of crowds, in which stock prices become unmoored from future earnings. Shiller has shown that when stock prices rise too far ahead of corporate earnings, then a correction is likely. In 1996, he issued a prescient early warning of the dot-com bust and, in an influential briefing at the Fed, persuaded then-Chairman [Alan Greenspan](#) to warn of "irrational exuberance" before the bubble burst.

Similar forces are at play in the housing market, where the ratio of house prices to rents can predict

changes in home prices, much as the ratio of share prices to earnings predicts stock prices. This style of analysis led Shiller to call the housing bubble well before its implosion.

If the Fed were as capable as Shiller of spotting financial bubbles, it would surely be more active in trying to prick them. That it remains largely on the sidelines suggests that the Fed is modest about its ability to replicate Shiller's uncanny accuracy.

Perhaps, then, the broader lesson is that Shiller teaches us to be on the lookout for when we're gripped by a mass delusion. Numerous studies in behavioral finance, as well as the lessons of the 2008 financial crisis, have shown that providing people with accurate information may be the best remedy for mass delusion.

The insights of the third laureate, Lars Peter Hansen, are less well known beyond academia yet potentially more far-reaching. Hansen developed a widely used statistical technique called the generalized method of moments. The broader context is that a statistician must always make assumptions to transform raw data into useful insight. Hansen's method broadened the assumptions that empirical researchers could rely on, thus allowing them to choose weaker assumptions. Or as he said this morning, "I think of it as showing how you can do something without having to do everything."

Statistical Toolkit

Although Hansen developed his method in the context of trying to referee the dispute between market efficiency and inefficiency, it has been even more useful beyond that domain, and today is part of the statistical toolkit used in every part of economics.

With a little latitude one could summarize this prize as suggesting that financial markets are efficient (Fama), except when they're not (Shiller), and that we have empirical evidence to prove it (Hansen). But there are also deeper lessons: This stuff is hard. Social science progresses slowly. Most important, we are still learning how and when financial markets generate wealth and provide economic stability and when they are a casino destabilizing the economy.

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