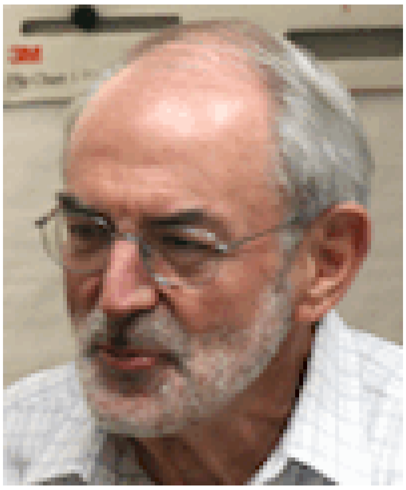
How to See ‘Unknown Knowns’

By Editor Test *Mon, May 27, 2013*

Market forecasters make two common mistakes, experts said at conferences this spring. In calculating averages of potential outcomes, they assume parallel universes. And they tend to blame “black swans” for their own blindness.

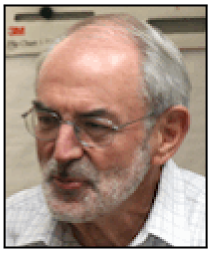


The likelihood of “black swan” events and our ability to foresee them or not has been a focus of debate among academics since the financial crisis. It’s not clear if hedge fund managers or other market mischief-makers pay much attention to what academics say about this issue, but maybe they should.

At two conferences this spring, one sponsored by the Wharton School’s Pension Research Council and the other at a Society of Actuaries gathering in Toronto, two specialists in risk-assessment weighed in with their thoughts on the matter. Their presentations were among the most entertaining at their respective conferences.

Guntram Werther, Ph.D., professor of strategic management at Temple University’s Fox School of Business, told actuaries that forecasters who missed the approach of the financial crisis just weren’t very good forecasters. They were blinkered by overspecialization and a fixation on inadequate models.

“Just because an event was broadly missed, that doesn’t make it unpredictable,” Werther said. “In many cases, someone, or many people, foresaw it and were ignored.” That was the case in the 2008 financial crisis, where many writers pointed to the dangerous over-expansion of leveraged lending years before the actual crash.



Werther (at right) quoted former Secretary of Defense Donald Rumsfeld’s famous remark about “known knowns, known unknowns, and unknown unknowns.” But he added that there are also what Irish commentator Fintan O’Toole less famously called “unknown knowns”—information that was available at the time but that an analyst or an economic model simply missed, for a variety of reasons.

Overspecialized education is one of Werther’s bogeymen. Many of history’s best prognosticators have been people who, however well-trained in a specific field, also have a knowledge of comparative history, philosophy, religion, psychology, as well as different legal, political and economic systems. He came close to advocating a revival of liberal education, at least at the undergraduate level.

Dicey

At the Pension Research Council’s annual gathering in Philadelphia, Tim Hodgson, senior investment consultant and head of the Thinking Ahead Group at TowersWatson, explained that our tendency to focus on averages blinds us to the risk of rare but catastrophic events.

More intriguingly, he suggested our analytic tools make a faulty implicit assumption about the nature of time and the existence of parallel universes. They assume that "we have infinite lives all running in parallel," rather than a single life, he wrote in a paper submitted to the conference.

Hodgson (left), whose Thinking Ahead Group has published annual rankings of systemic threats to civilization, explained that we often, and foolishly, rely on averages of alternate outcomes in order to evaluate a decision—as though we could experience all of those outcomes and arrive at a net gain or loss.

He gave the example of rolling a die six times: If you roll numbers one through five, you win an amount equal to 50% of your wealth. If you roll a six, you lose all your wealth. The average of these outcomes—the "expected return"—is a 25% gain, he said, which suggests that you should roll the die.

But that average masks the fact that you have a one-in-six (16.7%) risk of losing everything you have. Which explains why most people instinctively shy away from an offer like that, Hodgson says. He also points out that catastrophic, irrecoverable losses might be rare in the stock market, they can easily occur if a pension fund becomes insolvent.

Regarding the retirement savings crisis, Hodgson noted that it's not hard to imagine an individual socking away 10% of pay for 45 years, earning a real return of 3.5% and funding a 21-year retirement with savings equal to about 10 times final earnings. Any single person might have a good chance of accomplishing that, all things being equal.

But the likelihood that *everyone* can accomplish this feat is much lower, he points out. Americans are always accused of under-saving. But the current average savings level of about 3.3%, he said, might represent an equilibrium. Additional saving might trigger Keynes' paradox of thrift, where over-saving leads to under-consumption and an economic slowdown.

If we're already saving as much as we can without creating unintended consequences, he adds, then the idea that, collectively, we can all afford the kind of retirement we imagine (based on our experiences during the singular post-World War II boom) is mathematically unlikely. There will be winners and losers—perhaps more losers than winners—but most Americans seem to accept that.