Empirically rich new study finds most people alter their risk-management approach depending on the type of decision

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Take a moment to consider some of the financial choices you've made in recent years. Do you have a consistent approach to your money, either by playing it safe or having a willingness to take risks? Or do you not have a set philosophy, and instead make your financial decisions independently of each other?

In economics, classical theory holds that we have consistent risk preferences, regardless of the precise decision, from investments to insurance programs and retirement plans. But studies in behavioral economics indicate that people's choices can vary greatly depending on the subject matter and circumstances of each decision.

Now a new paper (PDF) co-authored by an MIT economist brings a large dose of empirical data to the problem, by looking at the way tens of thousands of Americans have handled risk in selecting health insurance and retirement plans. The study, just published in the American Economic Review, finds that at most 30 percent of us make consistent decisions about financial risk across a variety of areas.

This empirical finding belies the notion that people are uniformly consistent in their approach to risk, across types of financial decisions —but it also shows that not everyone continually changes their risk tolerance, either.

"As economists, we often place great value on where people put their money in the real world," says Amy Finkelstein, the Ford Professor of Economics at MIT, who helped conduct the research. "Most extremes are not true in the reality, and we found our answer was in the middle."

Many choices, different degrees of risk

The research used data on the choices made in 2004 by 13,000 employees about their health insurance and retirement plans at Alcoa, Inc., the international aluminum manufacturer whose headquarters are in Pittsburgh.

Those Alcoa employees were faced with choosing plans for five types of health insurance, as well as 401(k) retirement funds. The insurance decisions involved choosing an overall health-care plan, prescription drug coverage, a dental plan, long-term disability coverage, and short-term disability coverage. The workers also had 13 different 401(k) plans available to them, bearing different degrees of risk.

Because employees were making decisions in both the health-care and retirement domains, the researchers had the opportunity to see how the same individuals handled different types of choices. Or, as Finkelstein puts it, the economists could ask: "Does someone who's willing to pay extra money to get comprehensive health insurance, who doesn't seem willing to bear much financial exposure in a medical domain, also tend to be the one who, relative to their peers, invests more of their 401(k) in [safer] bonds rather than stocks?"

The researchers ranked the employees by risk tolerance, relative to each other, in all six areas of investment, and found that there was significant variation in the financial exposure people were willing to sustain. Then again, the fact that up to 30 percent of the Aloca employees were consistent in their risk, Finkelstein says, gives some credence to each of the competing notions of how people assess risk.

"I think you could look at these results legitimately through two very different lenses," Finkelstein says. "You could say, if 30 percent of our sample is making consistent choices across all six domains, that suggests there is a fair amount of generality in people's risk preferences, and the classical model has some bite. Or you could say, if just 30 percent of people are making choices that are consistent across domains, there are a lot of context-specific risk preferences," in keeping with behavioral economics.

The results do come with a twist: The researchers found that the employees' decisions about the risk levels of their 401(k) plans had less predictive power for their insurance choices than did any of the five insurance choices. Finkelstein says she thinks it is "a reasonable interpretation" to suggest that this discrepancy represents "a large drop in the commonality" of people's risk tolerance across a diversity of financial domains.

Besides Finkelstein, the authors of the paper are Liran Einav, an economist at Stanford University; Iuliana Pascu, a doctoral student in economics at MIT; and Mark Cullen, a professor at Stanford's School of Medicine. Cullen has had a partnership with Alcoa, since 1997, to study the health of its employees.

A 'need for more research'

Economists say the research is illuminating, both for its conclusions and the wealth of information it contains.

"One of the important things this paper does is to clarify the difficulty of answering how general risk attitudes are from one choice domain to another," says Daniel Silverman, an economist at the University of Michigan who has read the paper, adding: "In some circumstances and for some groups, that assumption of a common risk attitude across choice domains isn't a very good assumption." At the same time, Silverman notes, the findings leave open the possibility that some people "could have just a single attitude to risk, and make very different choices across domains," to balance out those particular risks.

The paper, Silverman observes, also "brings uncommonly high-quality data to this question. It's very rare to see the market decisions of a group of people in a comprehensive way."

Finkelstein suggests the study can be useful for social scientists or policymakers who build models or construct programs that make assumptions about risk tolerance; now those models can include more specific estimates of the ways people bear risk.

"I don't think it definitely solves this problem and ends the discussion," Finkelstein says, "but hopefully it suggests potential changes in best practices, and a need for more research going forward."

Finkelstein, who earlier this year won the John Bates Clark Medal, awarded annually by the American Economic Association to the economist under age 40 who has made "the most significant contribution to economic thought and knowledge," is continuing to conduct research related to this study.

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