So You Think You’re a Risk-Taker?

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Nothing is more important for investors than learning how much they can stand to lose. But nothing is harder to learn—until it’s too late.

The stock market’s sharp swings earlier this month, after three years of steady profits, weren’t nearly steep enough to remind us all how much it hurts to lose money.

Because people have a remarkable ability to distort their own memories, investors who panicked in 2008 and 2009 may be kidding themselves about their ability to survive another crisis. And the typical “risk-tolerance quiz” used by financial advisers is almost useless in predicting how you will react to losses, because perceptions of risk vary so widely.

Increasingly, scientists are tackling the problem. A new study, just published in the prestigious Journal of Neuroscience by a team of researchers at University College London, the University of Sydney, the University of Pennsylvania, New York University and Yale University, found that the density of cells in one region of the brain predicts how willing people are to take financial risk.

This research appears to “provide the first link between brain structure and risky choice,” says neuroscientist Scott Huettel of Duke University, who wasn’t involved in the study.

I recently volunteered as a guinea pig in the experiment, which has been run on more than five dozen people; the results have been controlled for age and sex. A scan of my brain showed that the thickness of gray matter in my right posterior parietal cortex—a small area toward the rear crest of my skull—is slightly below average.

Sure enough, when the researchers tested my risk tolerance, they found that it is also slightly below average.

“People who have a larger chunk of gray matter in this area will, on average, have a greater tolerance for financial risk,” says neuroscientist Paul Glimcher of NYU, one of the study’s authors.

Some of that depends on how risk is measured. Here, the choice was between a number of binary gambles: on the one hand, a 50/50 chance of winning a small amount of money, and on the other, variable or uncertain odds of winning much larger sums. None of the gambles could result in a loss. I wouldn’t know until later which of the bets would determine my payout.
When I couldn’t tell what the odds were, I wouldn’t bet at all. Otherwise I bet only when both the amount at stake and the odds seemed worthwhile.

In the end, after rolling a die to see which of my bets would count, I won $19.90 (which I will be donating to charity).

But, as psychologist Elke Weber of Columbia Business School points out, risk tolerance varies across activities and contexts and isn’t “a fundamental trait.” Someone can like gambling in Las Vegas and still invest primarily in cash and bonds.

As for me, I haven’t made a short-term trade in an individual stock in more than a decade, partly because my appetite for that kind of risk is low. The new experiment appears to be a promising measure of this sort of risk tolerance, especially relative to other people.

But I also added aggressively to my diversified stock holdings throughout the financial crisis (and advised readers likewise). That suggests that I’m not very sensitive to the risk of interim losses on a long-term portfolio.

For most investors, the most-damaging risk is probably what Greg Davies, head of behavioral finance at Barclays Wealth and Investment Management, a unit of Barclays PLC, calls “deviating from your long-term plan in pursuit of short-term emotional comfort in a time of unease.”

When will pain exhaust your patience? Science can’t determine that yet. But you might be able to if you give honest answers to questions like these:

“**What did I do in 2008 and 2009?**” Your memories of cowering under your desk or being glued to financial television have probably faded. So the only way to tell for sure is to dig up your old account statements. If you sold in 2008 and 2009, you probably will sell in the next panic, too—so you better not have greater stock exposure now than you did in 2007.

“**How flexible are my goals?**” Your ability to withstand risk depends partly on how much money you have—but also on how much you plan on spending in the future. If you absolutely have to buy that expensive house in the next year, your capacity for taking risk is more limited than your cash balance might imply.

“**What risks have I protected against?**” Many financial advisers have loaded up their clients on assets like high-yield bonds, emerging-market debt and bank-loan funds. In a crisis, these income-producing but risky investments tend to go down at least as much as U.S. stocks. The best insurance against a drop in stocks is plenty of cash and investment-grade bonds; make sure you have it now.

“**Have I turned rules into habits?**” It’s human nature to believe, when times are calm, that you will do the right thing in the heat of the moment. But you can be placid in a panic only if you have practiced rules until they have become habits. If you obsessively checked the value of your portfolio earlier this month, you need to ban yourself from looking at your accounts while the market is open. And if you can’t turn that rule into a habit, you probably have too much in stocks for your own good.

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