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How risk affects individual investors

by Professor Donald Wehrung

UNDERSTANDING RISK

Do people perceive risk correctly?

Sometimes, but people perceive situations to be more risky than statistical incidence rates, when the situations are out of their control, unfamiliar, involve a high degree of media exposure (especially of catastrophic events), or involve technologies that they don't understand. For example, people perceive the chances of dying in a plane crash to be greater after extensive media coverage of a crash.

In investment settings, because individuals have different capabilities to withstand possible losses, smaller investors, facing the same market as institutional investors, perceive investments to be riskier.

Do people do a reasonable job evaluating risk?

In many cases no, because people have systematic biases in the way they assess and use probabilities. They often incorrectly estimate probabilities that are very low or very high. For example, people tend to ignore adverse, low probability events such as floods or earthquakes. They can also let their values and beliefs interfere with their risk evaluation. Wishful thinking can lead people to overestimate the chances of a big payoff. People are often too confident about their predictions, giving little credence to the possibility of extreme outcomes.

People tend to lack balance in their risk assessments. They let the "bandwagon effect" get in the way of prudent risk evaluation. When things are going well, people tend to overestimate the chance of being lucky.

As mentioned above, the media can influence people's evaluation of risk. For example, the business press often highlights investments that have done very well or very poorly. If the reported analysis is based on either short-term performance or is influenced by an extraordinary event, it may be a poor indication of future performance.

TOLERATING RISK

Do peope know their own risk tolerance?

Studies show that people often misjudge their own risk tolerance. One likely reason is that there are pressures in North American culture to see ourselves as more willing to take risks than we really are.

Can people change their risk tolerance levels?

While many believe that an individual's tolerance for risk is an unchangeable personality trait, research has shown that to be untrue.

Some stereotypes have, however, confirmed by research. For example, risk taking tends to decline with age and to increase with wealth.

Do people have the same risk tolerance for all aspects of their lives?.

Few people are either consistently risk-averse or risk-taking. Instead people take a 'portfolio' approach to the risks in their lives. In other words, people have an overall aggregate level of tolerable risk. As the risks increase in one area of life (*e.g.*, a marriage breakup), acceptable risks in other areas decrease. Before considering what level of investment risk is acceptable, it is important for people to know what other risks they're facing.

CONTROLLING RISK

Do people have to accept risk as it is?

Not at all. Controlling uncertain events is an effective way of changing their riskiness. People reduce investment risk by seeking professional advice and management; educating themselves; diversifying and monitoring their investments.

SUMMARY

While risks provide both excitement and stimulation, most people prefer to avoid unnecessary or foolhardy risks. When assessing your tolerance for investment risk, you should evaluate the overall levels of risk in all aspects of your life. If you already have high risks in areas such as career, health, or family, it may not be wise to take on additional high financial risks, or vice versa. Remember the old adage "Do you want to eat well or sleep well?"

Risk is pervasive and will always be with us. The best we can do is to foresee some of the risks ahead and to control or mitigate some of the outcomes.

Donald A. Wehrung is Associate Dean and Professor of Management Science and Policy Analysis, Faculty of Commerce and Business Administration, University of British Columbia. Over the past twenty years he has studied, along with his colleague Kenneth MacCrimmon, the risk behaviour of many North American executives. These executives answered an extensive portfolio of questionnaires and participated in interviews about hypothetical risky situations, how they handled naturally-occurring risky situations, and their attitudes toward risk. These studies, many of which involved personal investment decisions, have revealed important insights regarding the investment behaviour of senior managers in particular and of investors more generally. Detailed discussion of the findings is available in Taking Risks: The Management of Uncertainty (by *K.R. MacCrimmon and D.A. Wehrung*, The Free Press, paperback, 1988*).*

The article EM9325 reprinted above is used in Figure 7.1 of the STAT 220 Course Materials and in Statistical Highlight #40.