Avantis Investors™
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Investment Risk, Investor Risk Tolerance and Goals-Based Portfolios

ACADEMIC PERSPECTIVE

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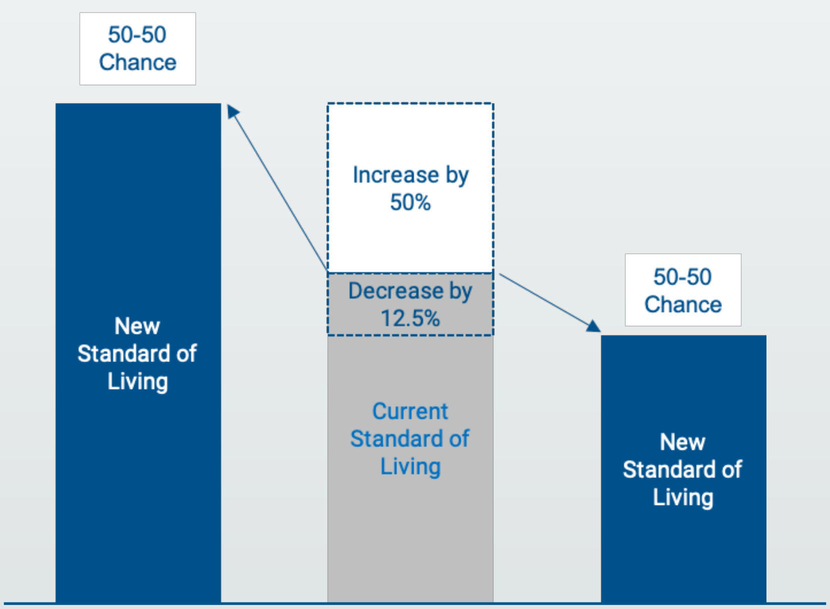
Consider your answer to the following question:

"Suppose you are given an opportunity to replace your current investment portfolio with a new portfolio. The new portfolio has a 50-50 chance to increase by 50% your standard of living during your lifetime. However, the new portfolio also has a 50-50 chance to decrease your standard of living by X% during your lifetime. What is the maximum decrease you're willing to accept in your standard of living?"

In a survey, Americans were willing to accept, on average, an approximate 12.5% decrease in their standards of living for a 50-50 chance at a 50% increase. See **Figure 1**. But the range of responses was wide—from those not willing to accept any reduction, to those willing to accept a 50% reduction.[1]

Figure 1 | Risk Tolerance Scenario



This question and its answers tell us much about investment risk, assessments of investor risk tolerance, investor goals and suitable goals-based portfolios. For one, investment risk is more precisely articulated as failure to reach an investor's goal, not volatility of portfolio returns. And an investor's risk tolerance originates in her investment goals.

Two prominent goals are reflected in this question. One is protection from poverty, for example, having an adequate level of retirement income. The other is prospects for riches, such as the ability to pay off a child's college debt or donate money to charities.

Risk in goals-based portfolios isn't measured by the volatility of the returns of a portfolio, or even by portfolio losses, but rather by failure to reach goals. To use a simple example: Investing an entire portfolio in a money market fund ensures low volatility, but it's hardly a low-risk portfolio because it almost certainly guarantees that it will fail to satisfy even a minimum retirement goal.

A financial adviser told me about a client who managed to save enough money to retire at 60. Her savings ethos derived from a poor childhood. She was always afraid she would end up living in a box eating cat food. Despite having more than enough money to sustain her lifestyle for the rest of her life, roughly 70% of her portfolio was in bonds. "By nature, I'm risk averse," she said.

That woman speaks in the language of risk but thinks in the language of goals. Her goal of protection from poverty—not living in a box and eating cat food—motivates her to keep a fat protection-from-poverty portfolio layer in bonds.

Why does it matter if an investor speaks in the language of goals rather than the language of risk? Potentially, a lot. Persuading that woman in the language of risk not to be so risk averse is hard when she perceives risk aversion as part of her nature. It might be easier to persuade her in the language of goals and perhaps a spreadsheet that may satisfy her protection-from-poverty goal with a portfolio containing much less than 70% in bonds.

Speaking the language of goals is also beneficial when investors declare, as some do now, in our COVID-19 era, that they can no longer take the risk of stocks that have fallen so steeply. An adviser speaking the language of goals might forestall hasty dumping of stocks by pointing out that while losses are always painful, that investor still has more than enough in bonds and stocks to forestall poverty.

Advisers who follow the goals-based approach don't accept, as is, clients' stated choices of percentage decreases in standard of living for a 50-50 chance for a 50% increase. They don't proceed to construct portfolios and financial plans reflecting clients' stated choices. Instead, they probe clients' stated choices and guide them to better choices.

Does the very conservative offer of a 3% decrease in standard of living come from a man who is retired or close to retirement with financial capital in his protection-from-poverty portfolio layer but little or no human capital in current or potential employment income? Is the man satisfied with his current standard of living? Would he be able to draw on his financial capital to maintain his standard of living throughout his life with some margin to spare? If this is the case, then his 3% offer is reasonable and so is a portfolio heavy in cash and bonds.

Conversely, is the client a young man with little financial capital but substantial human capital in his protection-from-poverty portfolio layer, in a steady job and promising career? The adviser might point out to his client, perhaps with the aid of simulations, that his offer of a 3% reduction in standard of living for a 50-50 chance for a 50% increase is likely to lead to a portfolio heavy in cash and bonds that wouldn't support his current standard of living throughout his life, let alone increase it.

Or consider a woman who is willing to offer a large 50% decrease in her standard of living in exchange for a 50-50 chance of a 50% increase. An adviser would probe further. Is she a young woman with substantial human capital in her protection-from-poverty portfolio layer, who can therefore devote her small financial capital to her prospects-for-riches portfolio layer? If so, a portfolio heavy in stocks is reasonable, or perhaps even a business venture.

Conversely, is she an older woman like Elizabeth White, author of "Fifty-Five, Unemployed, and Faking Normal," who invested her barely adequate protection-from-poverty portfolio layer in a store and lost it all?[2] Older investors with no more than adequate protection-from-poverty portfolio layers can afford to buy a few cheap lottery tickets to keep alive prospects for riches, but they have little human capital to replenish financial capital lost in business ventures.

Advisers following the goals-based approach also ask questions that identify wants that interact with risk tolerance and possibly distort it, such as wants for maximization. What is your level of agreement with this statement? "I always want to have the best, second best isn't good enough for me." The survey of Americans revealed that men have greater wants for maximization than women and that the young have greater such wants than the old. People who declare strong wants for maximization tend to declare high levels of risk tolerance.

The survey also revealed that people who are highly confident in their ability to beat the market tend to declare high levels of risk tolerance. Advisers should explore whether high declared risk tolerance reflects anything more than overconfidence or strong wants for maximization. Wants for maximization are associated with aversion to regret. What is your level of agreement with this statement? "Whenever I make a choice, I try to get information about how the other alternatives turned out and feel bad if another alternative has done better than the alternative I have chosen."

The survey showed that maximizers tend to be especially averse to regret, but regret is different from risk. Indeed, the correlation between regret aversion and risk aversion is close to zero. In turn, regret is associated with cognitive shortcuts and errors of hindsight. We use hindsight shortcuts to examine the quality of our choices, comparing our outcomes to outcomes of alternative choices. We feel the glow of pride when our outcomes are better, and we feel the pain of regret when our outcomes are worse.

Hindsight shortcuts are great teachers. We chose to study for an exam and aced it. We feel the glow of pride and learn that studying is the key to acing exams. Our classmates chose partying and failed the exam. They suffer the pain of regret and learn that partying ends in failure.

Hindsight shortcuts turn into errors, however, when luck loosens links between choices and outcomes. This loosening is common in investments. We made a good choice to invest a portion of our portfolio in stocks. As luck would have it, stocks plunged during the COVID-19 pandemic. We know, in hindsight, that we would have had a better outcome if we had parked all our money in a money market fund. We feel the pain of regret for having invested anything in stocks and could easily learn the wrong lesson—never invest in stocks.

Advisers do well when they listen to clients, ask them questions, empathize with their goals and educate them. This includes educating them about risk and risk tolerance on the way to prescribing suitable portfolios and financial plans intended to enhance their clients' wealth and well-being.

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Endnotes

[1] Carrie H. Pan and Meir Statman, "Questionnaires of Risk Tolerance, Regret, Overconfidence, and Other Investor Propensities," *Journal of Investment Consulting* 13, no. 1 (2012): 54-63. https://ssrn.com/abstract=2144481

[2] Elizabeth White, *Fifty-Five, Unemployed, and Faking Normal: Your Guide to a Better Retirement Life* (CreateSpace Independent Publishing Platform, 2016).

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