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A More Intuitive Way to Determine Asset Allocation for Investors

'Determining a portfolio's asset allocation is one of the most important decisions investors make,' says a business professor who developed the 'gain-pain' index.

ROBERT POWELL

Financial advisers typically use — in addition to a client's stated investment objective and time horizon — a risk tolerance questionnaire to determine an investor's asset allocation, or what percentage they should invest in stocks, bonds, and cash.

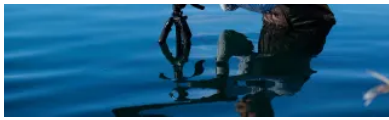
But those questionnaires, which are often referred to as RTQs, are nothing more than black boxes that spit out an asset allocation without highlighting the benefits and costs of the portfolio being considered, says **Javier Estrada**, a professor at IESE Business School.

"Determining a portfolio's asset allocation is one of the most important decisions investors make," said Estrada. "Financial advisers usually deal with this issue by giving individual investors an investor questionnaire, which is a black box that suggests a portfolio without any backing intuition. The problem with a black box is that if an investor does not quite understand why an asset allocation is good for him, he is not very likely to stick with the portfolio through the inevitable hard times he will have to face."

To overcome this shortcoming, Estrada has created a new type of asset allocation tool — he calls it the gain-pain index or GPI — that can be used by financial advisers with their clients. Read: [The Gain-Pain Index: Asset Allocation for Individual \(And Other?\) Investors](#).

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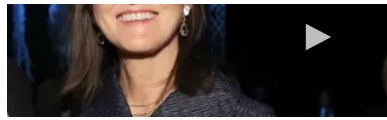




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According to Estrada, his GPI aims to make the process of allocating a client's assets more intuitive and it enables a financial adviser to highlight the relevant trade-offs of different portfolios (asset allocations).

The methodology, as with most RTQs, accounts for the investor's [risk aversion](#) and intended holding period for the portfolio. But, most importantl, it also views risk in a more comprehensive way than just volatility (which is what most RTQs focus on), Estrada said.

For instance, in his model, the gain is given by the return expected from each portfolio and the pain by three sources of risk: volatility, the probability of suffering a loss, and the magnitude of the loss, the last two which are combined into one variable, the expected loss. "These last two variables are a far more intuitive way to assess risk than volatility," said Estrada.

And advisers who might consider using Estrada's GPI should take comfort in knowing that his idea is built on well-established research.

For instance, the pain component of the GPI is partially inspired by the [misery index](#) pioneered by Arthur Okun, chairman of the Council of Economic Advisers during part of the Lyndon Johnson administration. "The pain component has to be evaluated taking into account an investor's risk aversion coefficient, and (my) paper shows a way to estimate the latter through a gamble," he said.

What's more, the underlying idea of the GPI, Estrada wrote in his paper, is not entirely different from Harry Markowitz's 1959 research on mean-variance approximations to expected utility.

[The Secret to Retiring Successfully](#)

So, here's an example of how the GPI works, at least, on paper.

The GPI considers — using some complicated math — the gain and pain of different portfolios (asset allocations), as well as an investor's risk tolerance, the portfolio's expected holding period, the probability of suffering a loss over the portfolio's expected holding period, and the average loss.

And the result, the GPI, ultimately highlights the trade-offs involved between the return expected from different portfolios on the one hand, and the volatility, probability of suffering a loss, and the average loss of those portfolios on the other hand. And the goal would be to select the portfolio with the highest GPI, or at least understand the trade-offs associated with not selecting the highest GPI.

In one of many tables in his paper, Estrada examined 21 asset allocations with different proportions of stocks and bonds and a 20-year holding period and discovered the optimal asset allocation to be 95% stocks and 5% bonds.

According to Estrada, the main benefit of such a table is that it can be presented to an investor, who would be able to evaluate the expected gain (return) and pain (volatility, probability of suffering a loss, and average loss) of different asset allocations.

"An investor would be able to observe, for example, that portfolios with at least 70% in stocks have never lost purchasing power over 20-year periods, which, if history is any guide, implies that the expected (inflation-adjusted) loss for these relatively aggressive portfolios is 0," he wrote in his paper.

Of note, Estrada's proposed GPI model is used to determine optimal asset allocations for 21 countries and the world market, for different holding periods and levels of risk aversion, and generally yields somewhat more conservative portfolios than those determined by standard mean-variance optimization.

So, what say experts about Estrada's work?

"It is an interesting idea, but I wonder how many financial advisers would drop what they are doing to use it?" asked John Grable, a professor at the University of Georgia.

To be sure, it's unlikely that financial advisers will drop what they are doing. But they should consider doing so given the findings from a 2016 study.

"PlanPlus reveals a disturbing lack of quality risk tolerance questionnaires (RTQ) and support tools for financial advisers," [wrote](#) Michael Kitces, the publisher of the Nerd's Eye View blog.

"In part, this appears to be driven by the fact that regulators articulate the principle of 'know your client's risk tolerance' but provide little guidance on how it should be done to ensure that it's right. And to a large extent, the problem stems from the reality that neither regulators, academics, nor advisors themselves, even have agreement on exactly what key factors of a client's 'risk profile' should be evaluated in the first place."

So, given the imperfect state of RTQs, advisers might well consider giving the GPI a test drive. If nothing else, the GPI could be used as a tool to confirm or adjust a client's current asset allocation. And what would be the harm in doing more due diligence?