



WHITEPAPER

# Risk is Personal



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## Finance is Complicated

Each month, the Federal Reserve releases 45,000 pieces of economic data, each of which can impact the financial lives of average investors. Traditional approaches suggest we should consider each of these data points when we make financial decisions, but the real world looks much different.

I don't know about you, but I haven't given much thought to the impact of the Baltic Dry Goods Index on my life lately, and that's not likely to change. That's because we're not data processing machines—instead, we're imperfect decision-makers suffering from Herbert Simon's theory of "bounded rationality," which states that the rationality of a decision will be impacted by the information consumed, the cognitive limits of the human mind, and any existing time constraints.<sup>1</sup> Basically, your limited processing powers force you to make simplifications about the world around you.

It's not whether or not we will simplify that is to be determined, but rather, **whether or not the simplification we choose will be to our benefit or detriment.**

**A silly example:** To accurately make the statement, "I don't like Brussels sprouts," a decision-making optimizer would need to eat every Brussels sprout in the world, which is difficult at best (if such an optimizer were to be dead set, the author suggests trying them roasted with kosher salt, freshly cracked black pepper, and a bit of bacon). Similarly, Simon suggests most people can only juggle five-to-seven variables at once when making an important decision, far short of the 45,000 pieces of economic data available to consumers each month. Just as you couldn't and don't need to eat every vegetable to make a well-informed decision about its taste, you can't process every bit of financial trivia accompanying a financial decision.<sup>2</sup>

But to complicate matters further (I told you, finance is complicated), we're not just looking to simplify one category of risk. We actually have multiple, simultaneous ideas about risk, some of which directly compete with one another.

Simon says that rather than making optimal decisions all the time, humans settle for "satisficing" or doing the best they can with the limitations at hand.

**To prove it, let me ask you a question:** Have you ever purchased a lottery ticket and experienced the sinking feeling that goes along with knowing your number was not picked? Although we understand the odds of winning are very slim, we hope against hope that today will be our lucky day, and we are hardly alone. The Mega Millions jackpot has sold \$1.5 billion tickets in a week running up to the grand prize drawing. That's roughly 4.5 tickets for every man, woman, and child in America. All this despite the fact you are 24 times as likely to be put to death by your state as you are to win Mega Millions, and three times as likely to be on death row and receive a last-minute pardon. You are nine times as likely to be killed by a falling TV, but if I asked you to bet on any of the aforementioned calamities, you would laugh at me. If we were rational economic decision makers, we'd similarly laugh if asked to gamble away our hard-earned funds on something as improbable as a lottery ticket, and yet, they continue to exist (and thrive).

Odds are, you had no misgivings about your chances of winning the lottery and didn't have your feelings hurt when I pointed out how irrational it is to play. Now let me ask you a second question—do you own any insurance policies? Odds are, if you are interested in a topic like behavioral finance, you have a couple.

"Okay, so what's with the weird questions, Doc?" you ask.

The reason is because buying lottery tickets and buying insurance are seemingly incompatible behaviors when considered in terms of traditional risk tolerance methodologies. This behavior is so irrational, in fact, a traditional economist would say people who buy both lottery tickets and insurance policies should not exist. After all, one is extremely risky and hinges its bet on amassing wealth, while the other is very conservative and focused on wealth

preservation. According to classical economics, these two preferences cannot exist in the same person. And yet, they do.

The truth is, there is nothing simple about human motivation or the threats we perceive to the things we want. At any given moment, we desire to protect the wealth we've accumulated, but also to "strike it rich" by taking gambles. So in addition to having shifting preferences, we also have multiple, simultaneous preferences. Much financial misbehavior occurs when these preferences conflict with the single, static risk category against which we have planned our financial lives.

For instance, an investor that identifies as "conservative" may grow restless with her fixed income products while her friends are getting rich because equities are on a tear. She may approach her advisor, upset she is missing out, and request a more aggressive approach. But when equities fall, as they always do for a time, she'll berate her advisor for being so reckless. After all, she identified as "conservative" as identified by that risk tolerance assessment she was forced to take.

An appropriate system for behavioral management is one that can satisfy both the risk-seeking and risk-averse preferences of a client at any given time.

Since we can't hold and process all relevant data, we have to choose what's most relevant to our specific needs. While this personalized approach makes sense at face value, it deviates from the two most often used means of simplification, which are referencing an external market index (e.g., Dow Jones Industrial Average or S&P 500 Index) or looking to our peers and adopting their goals. Rather than creating personal benchmarks, we often look to "the market" or our friends for what we should do.

Becoming a successful behavioral investor means **creating a system for measuring financial success and failure** that corresponds directly to your personal needs for safety and aspiration.



## Volatility as a Poor Proxy for Risk

When faced with overly complex ideas, we compensate by simplifying them. Investment managers, appropriately concerned about risk, use an asset's volatility to measure how risky it is. There are advantages to using volatility to define risk: it's easy to measure, can be factually reported, and it lends itself to the creation of elegant (if mostly useless) mathematical models. But there's a big drawback of using volatility as a stand-in for risk—it doesn't actually conform in any meaningful way to what it ought to measure. Legendary value investor Howard Marks stated it best:

"Academics settled on volatility as the proxy for risk as a matter of convenience. They needed a number for their calculations that was objective and could be ascertained historically and extrapolated into the future. **Volatility fits the bill, and most of the other types of risk do not.** The problem with all of this, however, is that I just don't think volatility is the risk most investors care about."<sup>3</sup>

**Risk is made up of two elements:** First, the likelihood of a negative occurrence, and second, the scope of the personal impact of the negative occurrence. For the average middle class American, buying one lottery ticket a year carries considerable "probability risk" but very little "impact risk." Sure, you're down a buck, but it's unlikely to affect your ability to meet your financial goals. Betting \$50,000 on a hand of blackjack may have high probability and high impact risk on most Americans, but would have little impact risk on say, Bill Gates. Even down a few hands, he'll likely be able to keep the lights on.

You probably nodded your head in agreement with the previous example, but this highly intuitive notion of risk is not the one best integrated into most financial models. If I asked you to define portfolio risk in real terms, you would give me an answer like, "the likelihood of me not reaching my personal financial goals, including..."

Risk is not an abstraction, and it is certainly not just the erratic movement of securities. Risk is not being able to pursue your dreams. Risk is a concept that has been stripped down to serve a computational end. A closer look at the roots of the word "finance" show a personal, goals-based approach aligns with the original understanding of the term. The word "finance" actually comes from the Latin "finis" meaning objective or goal. Finance, then, is the management of money to meet personal objectives. Risk management, by extension, is the safeguarding of money to minimize the potential that those goals will not be met.



**Real risk, as humans experience it, is not portfolio volatility. It's the likelihood they will fail to reach their goals.** This goals-based definition of risk accomplishes two things: it puts risk into a subjective human context, and it lengthens the timeline against which risk is measured.

Volatility is measured over a specified period, typically 30 or 90 days. While this short-term horizon works well for mathematical formulas, it's not what we use to measure most of our meaningful financial objectives, which typically exist further in the distance. By taking a short-term view of probability, we may mistake an investment vehicle for being more dangerous than it really is.

In any given month, average stock returns suggest an investor will have a 60/40 chance of a positive return. A 40% chance of loss is more than most investors can stomach, so when this is considered on a 30-day timeline, equity investing seems risky indeed!

But let's lengthen our horizon a bit to five years. Over five-year rolling periods, the stock market has only produced negative returns 12% of the time. Looking out further still, the stock market has not, so far, returned a nominal loss in any 12-year rolling period. Twelve years is a time horizon more likely to be consistent with your personal investment goals anyway.

Volatility-based risk paints a picture of stocks as scary, which they certainly can be over the short term. A goals-based view of risk, using timelines more consistent with most major personal goals, paints a different picture entirely.

To demonstrate, let me ask you a personal question, "What matters most to you in the world?" We've never met, so I can't say for certain, but if you're like most people, your answer is probably something like, "Provide adequately for my family" or "Leave a legacy" or "Be a great mother" or "Go back to school to finish my degree."

My point is, whatever your answer, the finish line probably isn't this afternoon or even three months from now. Meaningful goals usually exist along a time horizon a few years, if not a few decades, in the future. By using volatility as a stand-in for risk, we peg our measure of risk to a timeline far shorter (and scarier) than almost any of our actual goals.

I'm only attacking the idea of volatility as a primary measure of risk because I see the damage it does to ordinary investors and savers. Volatility is scary in the short-term, but it loses its sting when we truly understand its place. Since 1871, the market has risen or fallen more than 20 percent two out of every five years. Volatility is the norm, not the exception. It should be planned for and diversified against, but never run from. The sooner you can accept there will be 7-10 recessions in your lifetime, the sooner you will be able to invest in a way that manages the thing you ought to fear most, which is the possibility you will have insufficient funds to live the life of your dreams.

## Mimicry as a Poor Proxy for Risk

Neurons that fire both when we do something and when we observe the same action being performed by someone else are what scientists call “mirror neurons,” and they influence suggestibility.<sup>4</sup>

Mirror neurons are the reason you cry at a sad movie, cringe at the sight of someone else eating something gross, or close your eyes when the chainsaw-wielding hillbilly stumbles upon the unsuspecting group of college kids at the lake house. Mirror neurons are why “unboxing” videos exist—because it’s almost as fun to watch someone else open a new gaming system or expensive toy as it is to do it ourselves. To truly apply this learning, give your children a video of other children opening presents at their next birthday party. Tell them Dr. Crosby told you it’s more or less the same thing!

The power of social mimicry can certainly work for good—we might cry with a friend who has lost a parent we never met—**but can it also be used to manipulate our behavior?**

Consider the dreaded laugh track. I bet if we were to take a poll of the thousands of people who will read this paper, exactly zero will say, “I like sitcom laugh tracks.” Laugh tracks are corny, obnoxious, obtrusive, and the laughter itself often sounds inauthentic. If laugh tracks are so universally disliked, why do Hollywood executives continue to include them? They understand something we may not; however annoying canned laughter may be, it provides valuable social cues to viewers. Research has repeatedly shown laugh tracks cause viewers to laugh longer, harder, and to rate the viewing experience as more enjoyable.<sup>5</sup> In fact, laugh tracks have shown

to be most effective at improving the appraisals of especially bad jokes. We are programmed to do what others are doing, even when those “others” only exist on tape.

Mirror neurons and other mechanisms of the brain facilitate empathy, an invaluable resource for building relationships and community. Empathy enables us to experience each other’s emotions, even if we haven’t lived through the same experiences ourselves, allowing for comfort, support, and even shared elation. But this also makes us poor investors, more concerned with keeping up with others than providing for our own needs.

It’s natural to want to keep score to measure performance. After all, an athletic contest without a scoreboard may be good recreation, but it’s awfully boring viewing. But we have to keep score in a manner that is personally meaningful and consistent with the rules of the game. For most investors, keeping score means comparing their returns to those of the equity market benchmark—typically the S&P 500—or their neighbors.

Investors tend to adjust their risk preferences, personal values, and return expectations to benchmark to an impersonal market index, rather than something more customized to their needs. In addition to the intuitive appeal of personal benchmarking, it also offers a number of psychological benefits that make us better investors.

Measuring performance against personal needs rather than an index has been shown to keep us invested during periods of market volatility, enhance savings behavior, and help us maintain a long-term focus.



The industry term for benchmarking to personal needs is goals-based investing. Although each firm has its own approach, the common theme is that once individual return needs are decided upon, investments are “bucketed” into several tranches corresponding with personal goals. SEI Investments was one of the first firms to roll out a goals-based platform and had the good fortune (at least for researchers like myself) of doing so right before the financial crisis of 2008. This allows us to observe the behavioral impact of a goals-based approach on wealth management versus the more traditional approach of comparing returns to the broader market. They found the following distinctions between the two crowds.

**Of those in a single, traditional investment portfolio:**

- **50%** chose to fully liquidate their portfolios or at least their equity portfolios, including many high net worth clients who had no immediate need for cash.
- **10%** made significant changes in their equity allocation, reducing it by 25 percent or more.

**Of those clients in a goals-based investment strategy:**

- **75%** made no changes.
- **20%** decided to increase the size of their immediate needs pool but left their longer-term assets fully invested.

SEI concluded that “**goals-based investors are less likely to panic and make ill-informed changes to their portfolios.**”

From the vantage point of someone in a traditional portfolio, 2008 was a truly horrifying time. They would have seen their total wealth cut nearly in half with no distinction made between short and long-term needs. It’s no wonder 60% of SEI’s investors bailed or greatly reduced their positions.

The goals-based investor, on the other hand, would realize certain goals would be totally unimpacted by the recession as they were so far down the road. Since most goals-based approaches also include a short-term “safety” bucket, investors would have also had the immediate peace of mind to weather the storm. For an approach with such far-reaching impact, goals-based investing is blissfully uncomplicated. By simply increasing the surface area of our investments and labeling them with a purpose, we get the perspective we need to ignore volatility in favor of what matters most.

# Making Sense of it All

We've gone on quite a journey here, so I think it makes sense to revisit some of the foundational findings of behavioral science with respect to risk, and to discuss the broader implications for our money:

## 1 The Finding:

The enormous complexity of the financial world requires us to simplify how we think about our money.

### So What?

Take control of simplification by benchmarking to personal goals instead of externalizing to the market or the crowd.

## 2 The Finding:

We have multiple, simultaneous risk preferences.

### So What?

Wealth can be bucketed by mental accounting.

## 3 The Finding:

The names we give to different pots of money impact how we save, spend, and invest that money.

### So What?

Allot some money to protection, some to providing for the necessities of life, and some to dreaming.

## 4 The Finding:

Personalizing our investment process can shape how we view expected returns and lengthen our time horizon.

### So What?

Naming dollars and personalizing accounts allow clients to "align their gaze with their goals."

The best investors ignore the broader market and focus on getting the returns they need to live the life they want. But even though personal benchmarking makes sense, it also requires us to fight against behaviors we're used to.

As humans, we're generally more interested in being better than other people than we are in doing well ourselves. This "crab in a bucket" mentality explains the research of Meir Statman, who found those he surveyed preferred to make \$50,000 in a community where the average salary is \$25,000, than to make \$100,000 in a community where the average salary is \$250,000.<sup>6</sup>

Through my work, we've found that the only force greater than this sort of comparative greed is a focus on the values, convictions, and dreams of the client. Discovering these values requires far deeper conversations between advisor and client, but the result is a more meaningful journey that pays both behavioral and financial dividends.

By infusing our investment process with the values we hold most dear, we can secure for ourselves the returns we need, align our gaze with our long-term investment goals, and experience safety in the short-term.





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