Behavioral Finance: Pitfalls and Prevention for Plan Sponsors

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Many plan sponsors are paying increasing attention to behavioral finance, but seem to believe behavioral issues are relevant only to their investment managers. This article turns the mirror on ourselves: plan sponsors and other institutional investors. I believe there are "behavioral" lessons to be learned in how we conduct our professional duties.

The findings of behavioral finance and studies of group dynamics suggest natural tendencies of thought or action which, if unchecked, could lead to decisions that may not be in the organization's best interests.

These behavioral tendencies or biases are often cloaked in what may appear to be "common sense" approaches. Unfortunately, common sense can lead to biases that counter the following basic portfolio principles:

- the whole is different than the sum of its parts
- diversification into what may be seen as individually risky investments makes the overall portfolio safer
- returns are not all that matter (risk and liability behavior are equally, if not more important)
- long-term trends can be temporarily overwhelmed by interim volatility or short term failures
- the desire for near-term certainty and stability of returns (such as those offered by fixed income investments) can be detrimental to long-term investment goals that need protection against inflation

The purpose of this article is to point out some of those natural tendencies and relate them to common investment problems that face boards and committees in order to raise our collective consciousness with the goal of enhancing decision-making. Generally, these biases fall into one of three categories: mechanisms for simplifying problems, preferences in making judgments, or evaluating additional information.

MECHANISMS FOR SIMPLIFYING PROBLEMS

- **Mental Accounting.** People tend to concentrate on the parts rather than the whole. They naturally divide assets and liabilities into separate mental "accounts," segregate decisions within each compartment, and do not aggregate their thoughts into an overall position. For example, household budgets are split into grocery money, vacation money,

retirement money, and other similar categories, and people make decisions within each category to the exclusion of others. They will not readily see, or act, on portfolio-wide impacts. Many plan sponsors take a similar approach, leading to the underappreciation of diversification into areas that individually seem risky (such as high yield bonds)[1].

- "**Mister Jones**" **Effect.** Based on lyrics from "Ballad of a Thin Man" by Bob Dylan, "Because something is happening here/But you don't know what it is/Do you, Mister Jones?" This is the tendency to mistake chance for cause, see patterns too soon, or assume that short-term patterns aren't due to chance. For plan sponsors, there is the danger of confusing a "hot hand" with skill when it is more probable that chance alone is responsible.

- **Availability and Representativeness.** People tend to judge the likelihood of an event by how easily they can remember individual instances. While often justified, this approach can lead to poor decisions. For example, which is more likely – death by shark attack or by falling airplane parts? Death from falling airplane parts are 30 times more likely[2]. In short, familiarity is not synonymous with understanding.

PREFERENCES IN MAKING JUDGMENTS

- **Prospect Theory and the Endowment Effect.** Gains are treated differently than losses. There are two separate aspects of this mental framework: (1) the starting position for the judgment and (2) how potential movements from that position are judged or compared.

A position, once acquired, becomes part of a person's "endowment" and there is a psychological attachment that affects future decision-making. One major result of this attachment is that losses, particularly initial losses, hurt more than equivalent gains. Investors are sensitive to the characterization of results as "losses" or "gains," and alter their attitudes toward risk and return in response. In addition, it is initial relative gains and losses, not the absolute resulting position, that drive the perception. In essence, people generally are risk averse when it comes to gain (i.e., they don't want to risk losing what they have) yet risk-*seeking* to avoid loss.

Plan sponsors should be particularly aware of the tendency to sell winners early and let losers run, in the hopes of "getting back to even." Also, having "touched" a situation (a visit by a manager or an analyst who visits a company) tends to increase its perceived value.

- **Framing Effect.** "The glass is half empty or half full." The position from which people make relative judgments can be affected by how it is presented, or framed, for decision. For example, an altered reference point, such as movie theaters selling only oversized candy, make comparisons to determine a fair, relative price difficult.

[1]For more information on this topic, see *Controlling Misfit Risk in Multiple-Manager Investment Programs* by Jeffery V. Bailey and David R. Tierney, published by The Research Foundation of the Institute of Chartered Financial Analysts in 1998.

[2]As reported in *Newsweek* magazine on September 24, 1990, in an article titled, "Death Odds." Scott Plous also references statistics on causes of death in his book, *The Psychology of Judgment and Decision Making,* published by McGraw-Hill Higher Education in 1993.

- **Myopia.** Similar to "anchoring," recent events dominate perceptions and overshadow longer-term trends and true underlying causes. An event that occurs recently, even if not tied to the actual problem, can "anchor" a judgment. In addition, people do not revise opinions sufficiently for the impact of new information. One example is that security analysts do not revise their earnings estimates sufficiently and as a result, positive earnings surprises are more likely to be followed by subsequent positive surprises, and the same with negative surprises (when such surprises should be randomly positive and negative).
- **The Molehill Effect.** "Making a mountain out of a molehill." There is a tendency to overweight the impact of small probabilities and combine this with an aversion to uncertainty. Two well-known subsets of this phenomenon are the Certainty Effect (people will pay excessively to eliminate very small probabilities of loss) and the Lottery Effect. For plan sponsors, the Certainty Effect manifests itself in the preference for certain nominal return of cash and fixed income, even if they know that longer-term investment goals will be heavily influenced by inflation. The Lottery Effect has been used by researchers to explain the higher premium for lower-priced stocks in up markets versus down.[3]
- **The Othello Effect.** Increased detail in an explanation leads to increased confidence or belief (as in Iago's detail on the handkerchief convincing Othello that Desdemona was unfaithful in Shakespeare's tragic drama, *Othello*.) People also tend to confuse precision with reliability, and quantitative information as more reliable than qualitative. One impact of this is that the outputs of mean-variance optimization models are often taken as the "holy grail" of asset allocation, even though those models are notoriously imprecise, subject to severe estimation error, and usually require substantial qualitative overrides in order to make the outputs even appear to be acceptable.
- **Quasi-magical thinking.** "It's not true, but I believe it." People will tend to take actions or spend money for information – even though they know that those actions or that information will have no effect. A true story illustrates the phenomena: A visitor to the Nobel Prize-winning physicist Niels Bohr noted a horseshoe hung on the wall, and said, "But Professor Bohr, surely you can't believe in such a stupid superstition!" Bohr answered, "Of course I don't, but they tell me it works – even if I don't believe in it!"[4]

A related example of note for institutional investors are performance fees. These fees will either change future behavior – or they won't. If they do change a manager's behavior, then there may be added risk in the manager now swinging for the fences. Also, for managers with a number of clients for the same product, performance fees should have very little, if any, effect. If they

[3]For more information on this topic, see the article by Thomas Downs and Quan Wen, "Is There a Lottery Premium in the Stock Market" in *The Journal of Portfolio Management,* Vol. 28, No. 1, published Fall 2001, pages 112-119.

[4]From the book, *Inevitable Illusions: How Mistakes of Reason Rule Our Minds* by Massimo Piattelli-Palmarini, published by John Wiley & Sons in 1994, Page 99.

do not, then why have them – except for the psychological satisfaction in "misery loves company?"

BIASES IN EVALUATING NEW OR ADDITIONAL INFORMATION

- **Wishful vision or selective perception.** This is the tendency to see only confirming or positive data, and failure to look for non-confirming data. We often frame investigations so that only confirming evidence will show up, or will show up more frequently than normal. This also includes hindsight bias (sometimes called the "we knew it all along" effect), where the relative importance of factors is influenced by the recent past.

As a related example, gamblers (and investors, too) do not simply remember winners and ignore losers. Instead, they scrutinize their losses and interpret them as being the result of non-repeating or irrelevant factors and thus, are entitled to less weight going forward. Conversely, they see reasons in the winners that support an expectation of continued success.

- **The Lake Wobegon Effect.** "Where the women are strong, the men are good-looking, and all of the children are above average."[5] People have an overconfidence in their own abilities and tend to underestimate the "average." In most surveys, 80% of people believe they are a better-than-average driver. Some evidence suggests that experts tend to be more overconfident than the less experienced.[6] People like to believe that they are good decision makers, and will see or misperceive information (even after the fact) that supports that view.

These biases, along with other heuristics, allow us to simplify problems, make initial judgments, and evaluate new information in light of those judgments. As long as a problem is indeed the sum of its parts, combinations of relative improvements lead to increasingly better overall results, recent history is a good guide to the future, losses can hurt more than gains, and the world is as it appears, then these and other heuristics are valuable rules of thumb. Unfortunately, in the specific world of portfolio management, these "normal" assumptions are often overturned.

THE INFLUENCE OF MENTAL BIASES ON INVESTMENT DECISION-MAKING

Portfolio management requires looking across individual categories, and, particularly with risk, the portfolio *is* different than the sum of its parts. Relative improvements in individual parts actually can be detrimental to the whole. Recent history is often the worst indicator of future trends and gains and losses should be treated (in most instances for long-term investors) equally. In these and other respects, the normally reliable rules of thumb can lead both naïve and expert investment personnel astray. Given the influences of the biases addressed above,

[5]This quote is from Garrison Keillor's radio program, "A Prairie Home Companion" which features "News from Lake Wobegon," broadcast weekly on Public Radio.

[6]For more information, see Griffen and Tversky, "The Weighing of Evidence and the Determinants of Overconfidence." *Cognitive Psychology.* Vol. 24, No. 3. July 1992. pages 411-435.

let's focus on specific shortcomings board members and committees, particularly new members, may exhibit:

- **Focus on the parts rather than the whole.** People will concentrate, for example, on assets and returns, not asset behavior combined with the behavior of the liabilities, or will focus on behavior of individual parts of the portfolio in isolation from the interactions (and correlations) of the parts with the whole. Since the essence of portfolio theory is the portfolio whole is different than the sum of its individual parts, this concentration on individual compartments of the portfolio will be counterproductive. [Mental Accounting]
- **Err on the side of short-term certainty over longer-term returns.** There also will be a greater sensitivity than may be warranted to short-term volatility and a tendency to want to reduce short-term volatility with cash and bonds – and thus not rebalance when otherwise needed in down stock markets. [Molehill Effect, Endowment Effect, Myopia]
- **Tend to believe that returns are all that matter.** There is a tendency to ignore the integration of the simultaneous behavior of the liabilities, and the impact of volatility on investment goals (and thus in corporate plans, for example, not fully seeing how the losses on the liability side due to declining interest rates can more than offset gains on the asset side). [Mental Accounting, Myopia]
- **Believe that bonds and cash are safer than stocks.** There is a bias toward the annual safety of fixed income. Tied to this preference is an aversion to the pain of potentially larger short-term losses in stocks. This short-term pain can negate the longer-term benefit that real stock returns have delivered over real bond returns. [Endowment Effect, Molehill Effect, Myopia]
- **Think that a low risk portfolio will have only individually safe investments, and not see the longer-term benefits of diversification.** People will tend to concentrate on the portfolio parts rather than the portfolio whole, and not see the longer-term interaction of all the portfolio components. Boards will react to the losing parts of the portfolio and areas of underperformance and not focus on how they fit in with overall successes. By reacting too soon, they may reduce diversification in an area because of recent volatility just when that portion is about to "pay off" (such as many funds getting out of emerging markets after the Asia crisis of 1997 as emerging markets were beginning a spectacular run). [Mental Accounting, Endowment Effect, Myopia, Mr. Jones Effect]
- **Overreact to recent trends or recent events.** This can take a number of forms, from adopting recently successful strategies just before they fail (growth investing in the late 1990s), to abandoning strategies after they have suffered temporary debacles (such as a number of funds eliminating emerging markets after the Asian Crisis of 1997). A typical example is the preference for hiring managers who have had recently successful runs, usually just before their particular style goes out of favor.[7] [Myopia, Mr. Jones Effect]

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continued

Although this list may appear extensive, there are a variety of *additional* mental biases that can affect boards and staff members in addressing portfolio concerns. These are not new discoveries – many of them have been known under different guises for centuries. For example, Adam Smith in *The Wealth of Nations* commented extensively on the Lake Wobegon and lottery effects, and, in so doing, made the following summary which remains as good a description 200+ years after it was written as any in today's academic literature:

> The overweening conceit which the greater part of men have of their own abilities is an ancient evil remarked on by the philosophers and moralists of all ages. . . . The chance of gain is by every man more or less over-valued, and the chance of loss is by most men under-valued, and by scarce any man, who is in tolerable health and spirits, valued more than it is worth.[8]

Adam Smith has a long discussion of the economic impacts of this natural overconfidence, and demonstrates how this is linked to the lottery effect and the ignoring of the true underlying probabilities of the investment:

> That the chance of gain is naturally over-valued, we may learn from the universal success of lotteries. The world neither ever saw, or ever will see, a perfectly fair lottery; or one in which the whole gain compensated the whole loss; because the undertaker could make nothing by it. In the state lotteries the tickets are really not worth the price which is paid by the original subscribers, and yet commonly sell in the market for twenty, thirty, and sometimes forty percent, in advance. The vain hope of gaining some of the great prizes is the sole cause of this demand. . . . There is not, however, a more certain proposition in mathematics, than that the more tickets you adventure upon, the more likely you are to be a loser. Adventure upon all the tickets in the lottery, and you lose for certain; and the greater the number of your tickets the nearer you approach to this certainty.[9]

In the absence of careful thinking and analysis, there are biases and tendencies in individuals' thinking that can lead to results that are counter to many of the basic concepts that underpin the construction, monitoring, and implementation of institutional investment portfolios. Since most funds are run by boards that include people with a variety of backgrounds and opinions, with the input of experienced staff members, one might expect that these biases would be naturally countered. But another problem is that the findings of group psychology generally suggest that groups reinforce natural "illogical" behavior, not counteract it. In Part II of this article, I focus on the influence of "groupthink" and offer remedies designed to enhance our decision-making.

[7]For more information on this topic, see Michael L. Troutman's article, The Steinbrenner Syndrome and the Challenge of Manager Selection in the *Financial Analysts Journal,* Vol. 47, No. 2. March/April 1991, pages 37-43.

[8]Adam Smith. *The Wealth of Nations.* Bantam Books, 2003. page 149.

[9]Adam Smith. *The Wealth of Nations.* Bantam Books, 2003. page 149-150.

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