

The Babson Staff Letter



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Avoiding Investment Short Cuts and Bias Traps

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Introduction

"The whole problem with the world is that fools and fanatics are always so certain of themselves, but wiser people full of doubts."—Bertrand Russell

Those doubts arise from past experience grappling with difficult decisions and oftentimes getting the decision wrong. Just *why* people make mistakes when choosing between courses of action has been the life work of Harvard Business School Professor Max Bazerman, one of the most respected experts in man-

agerial judgment and personal biases, and the author of "Judgment in Managerial Decision Making."

In this well-respected work Professor Bazerman describes several reasons why we make mistakes when trying to make decisions where outcomes are uncertain. Relevant to Staff Letter readers, he even includes a chapter on errors investors are prone to make. In this Staff Letter we examine a few of the theories Dr. Bazerman highlights.

First a Few Words About Being Rational

Basic Western economic theory assumes that human beings are rational animals. Although such an assumption makes mathematical formulas easier to construct, the assumption itself is false. People can only be rational if they have perfect information, which most of the time they clearly do not. Time and cost constraints limit information quality, and people can store only limited amounts of information in their memories. Varying degrees of individual intelligence and sophistication of perceptions are likely to distort further the decision-making process, although this point is difficult to prove empirically.

So how do we make up for the lack of time, money, and other resources? Short cuts—which simplify our complex world by eliminating most of the data—and discovering rules, or heuristics, (a nice \$5 word of choice employed by theorists) that lead to acceptable decisions most of the time. Heuristics result in such well-used and appropriate sayings as "You only eat oysters in months that have an "R" in them." Or

rules such as a poker player should never draw to an inside straight (Dr. Bazerman's example), or a baseball player should never steal second when his team is losing by more than one run.

Investors employ several heuristics because we live in a world of great uncertainty, where we are typically outsiders to the businesses in which we invest. The fact that investment rules of thumb don't work perfectly is reflected in such contradictory sayings as "the trend is your friend" and "bulls and bears win, but pigs get eaten." So which unarguable rule of thumb is correct?

More specifically, for professional and amateur analysts and portfolio managers alike there are several heuristics that give rise to misperceptions and lead to significant decision errors. Worse, most people are unaware these biases exist. Below is a list of 15 common biases Dr. Bazerman has identified, which often lead to money-losing investment decisions.

15 Decision-Making Pitfalls

People make significant decisions on the vividness and recency of information, a process called availability. In his book "Freakonomics," author Steven Levitt uses statistics to show that car seats do little to protect our children. Keeping kids in the back seat

is most important. Yet a child riding without a car seat is considered reprehensible because of the visceral desire in all of us to keep our children safe.

Within the investment arena, investors avoided businesses once associated with organized crime and

ultimately missed opportunities to make great returns. Or consider Orion Capital, a small insurance company that insured white water rafting, small-company workers' compensation, and bungee jumping businesses. Although these businesses seemed extremely risky they were actually managed to very low loss occurrences because Orion's competitors shied away from these vividly risky operations.

Irretrievability is similar to availability but based more on failing to think beyond a preconceived notion. For instance, in the 1990s, when Intel experienced its famous math error, many value managers failed to invest in the semiconductor manufacturer because it was considered a "growth" stock—even though it was trading at 12x earnings and paid close to a 2% dividend.

Bill Miller at Legg Mason Value Trust set the record for mutual fund outperformance of the S&P 500 each year for over a decade by thinking "outside the box" of conventionally labeled value. He bought Dell, for instance, based on the fact that its earnings were worth more than the typical company's because it generated immense free cash flow and exhibited strong growth.

Probabilities and the Biases of Measurement

Sample size insensitivity occurs when people fail to consider whether the information they are getting from a few sources is representative of the population in general. The Pepsi challenge proved that people frequently preferred a sip of Pepsi to a sip of Coke. But what about the whole can? It turns out that Pepsi's sweeter taste tested positively for one sip, but less positively for an entire can. New Coke was born on that inferior sampling technique but was axed when more information came to light.

In professional investing, analysts sometimes do very light or geographically concentrated reference checks, which do not reflect the overall quality and strength of a company or demand for its products.

Regression to the mean indicates above- or below-average results don't necessarily continue forever. Major League Baseball pitcher Roger Clemens failed to win more than 11 games a year for 4 years between 1993 and 1996. Then he won at least 20 per season the following two years.

In terms of investing, we sometimes buy a company assuming that good historic performance stems from

People presume associations and ignore all available alternatives. For instance, if a portfolio manager tells an analyst to stay away from companies whose CEO has a beard, because managers with beards are not as good as clean-shaven ones (I'm not making this up unfortunately), the analyst would think badly of companies with bearded CEOs, thus "proving" or supporting the portfolio manager's assertion.

What the analyst should do is consider bearded CEOs of good and bad companies, and shaved CEOs of good and bad companies to make a decision whether his boss is correct. For instance, the facial hair CEO heuristic would have caused an investor to miss Biomet, whose bearded CEO, Dane Miller, has driven an approximate 35-fold increase in its stock price over the past twenty years.

In a confirmation trap, we unconsciously search for supporting evidence that we have made the right decision. You buy that green Mustang, and suddenly there are green Mustangs everywhere. (Therefore, you made the right choice.) An investment analyst buys shares of Company X and suddenly sees its products everywhere. Also, when she asks questions of customers, she may only pay attention to the most positive comments, ignoring any refuting evidence.

something that is sustainable, just when the unknown driving factor is about to change. For example, Intel stock peaked in the summer of 2000, three to four months after the demise of many of its customers. It had been reporting strong earnings in part because its order pattern lagged its customers.

Conjunctive and disjunctive events bias means that when several events all need to occur to result in a certain outcome we overestimate the likelihood that all of them will happen. If only one of many events needs to occur, we underestimate that probability. This is one reason why home remodeling projects always take longer than planned. There may be a 90% chance that the masons, rough carpenters, electricians, plumbers, sheet rockers, finish carpenters, painters, flooring installers, and cabinet installers will each arrive on time.

Unfortunately, this means that the chance that *all* will be on time is:

$$.9 \times .9 \times .9 \times .9 \times .9 \times .9 \times .9 \times .9 \times .9 = 38\%.$$

Remember one late start can ruin the entire chain of arrivals. By the way, if the chance of each showing up

on time is 80%, the chance of the entire job running on time is 13%. Lower it to 70% and the chance of a smooth job is 4%—shocking!

The inverse of this phenomenon is one reason deep value managers can do so well. They change the odds. The average person might look at five stocks with one having a 30% chance of doubling, two having a 25% chance, one at 20%, and one at 15%. If viewed one stock at a time, the typical investor would expect that none of them will likely double.

In fact, as the value manager knows, there is a 73% chance of having one of the five double, as long as the stock returns are independent of each other. It also explains why many value manager firms like Royce or Tweedy Browne own lots of stocks. They are changing the odds in their favor, so a bigger sample size gives them a better chance to achieve expected outsized returns.

The Vision Thing—Seeing What’s Really There and What’s Not

Insufficient anchor adjustment occurs when one sees a situation very similar to a past event and interprets it to mean the same thing will happen this time around. For example, if you thought Dell and Gateway were very similar companies, even though Dell sold to businesses and Gateway to consumers, you’d be reasonably correct. However, because of Dell’s superior execution, \$1.00 invested in it ten years ago would be worth about \$19 today, while \$1.00 in Gateway would be worth about 33 cents.

Hindsight relates to our evaluation of something or someone after events play out and we then have perfect knowledge. For instance, an analyst mentions a stock to a portfolio manager who is obviously biased against it. The analyst does not know much about the stock, so he decides not to pursue it. The company appreciates 50% in the next month and the analyst says, “I knew it!” and complains to the Director of Research about the portfolio manager.

This is a difficult situation because the analyst didn’t actually recommend the stock and in fact, if he had more information about it, he might not have allowed the manager’s comments to stop him. The same happens when portfolio managers hold stocks in the portfolio without complete confidence in the facts. They believe that they had predicted failure if the investment fails, and they are happy and forgetful if it does well.

Positive illusions are overly optimistic views of everything. Not surprisingly, most successful people are indeed optimistic. Optimism is attractive to your boss, inspires your employees, and stimulates great relationships with your vendors and clients. Unfortunately, it leads to sub-optimal decisions, especially in critical reviews of investments. An analyst can be overly optimistic that he is a good stock picker, that his information is high quality, that he knows more than the market, or that a company is executing as expected. None of these typically result in good stock market outcomes, except maybe during the bubble of the late 1990s.

Risk-Taking and the Comfort-Seeking Instinct

Avoiding uncertainty is a person’s desire to construct a stable world when uncertainty is the reality. Many new housing communities, restaurants, radio stations, and stores have a nostalgic quality, which people yearn for. It’s great to feel secure in your spare time but, if you invest for a career, not at work. Unfortunately, because of uncertainty avoidance, more confident sounding analysts often get portfolio managers to buy more of their stock ideas even if they are not as thoroughly researched as other analyst recommendations.

The asymmetry of risk tolerance means that, oddly enough, we are risk averse with regard to gains (expected) but risk takers when it comes to losses

(surprising). In simple terms, this is why we sell our winners, and hang on to our losers. Most every person who invests or trades in equities will remember this situation. You buy a stock for \$20 per share; it goes to \$19 based on incremental information in your mosaic that you feel lowers the odds of success. You don’t sell it. Would you sell if it were at \$21? Most people would be more willing to sell for a gain. Does the \$2 swing matter in reality? Absolutely not.

Regret avoidance is intuitive. People tend to feel more regret in an act of commission versus omission. Buyers feel much more remorseful about committing to a purchase and having to live with the

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decision (be it a good decision or not). Choosing *not* to buy requires no commitment and still leaves open the possibility of doing so in the future.

A corollary to regret avoidance is a person's regret when he makes a decision outside the norm versus a conventional choice. John Maynard Keynes said, "It is better for the reputation to fail conventionally than succeed unconventionally." Portfolio managers with widely different styles and philosophies tend to own many of the same stocks, because finishing in the middle of the pack allows them to maintain a highly lucrative career.

Internal escalation of commitment (the technical term for "pigheadedness") is the tendency to increase the support of an initial decision over time. A portfo-

lio manager may be unreasonably hopeful of success, or trying to protect his ego or reputation, rather than striving to help clients. So, if a new piece of negative information is brought to his attention by a colleague, he may be dismissive or argumentative rather than reflective to calculate the new likelihood of success.

Competitive escalation occurs when motivation comes from the outside. Some portfolio managers threw in the towel during the stock market bubble and started buying technology companies to try to keep up with competitors. Other people were making money easily, which validated the speculation and sparked the competitive juices.

Conclusions

How do we cope with all these issues in the uncertain environment that is equity investing? The best way is to acquire as much expertise and experience as possible, or make sure to hire seasoned investors to run your money. Expertise and experience are only gained through hard work and time. Also, acquire information directly from the primary source. If you need to accept second-hand information, note whether assumptions are replacing facts and aggressively question those assumptions.

Make certain your investment manager's behavior is consistent with his strategy. A portfolio strategy based on understanding the dynamics of individual companies should be supported by analysts who each follow no more than 30 companies. On the other hand, it is fine or even compelling if valuation-based and quantitative portfolios consist of hundreds of stocks. Managers in this case use a large population, which results in a higher likelihood that statistical measures like price/book or cash flow or earnings will, on balance, create higher returns for the overall portfolio.

Pay attention to your own decisions. Did any of the biases we touched upon ring a bell? Self-observation is very difficult and time-consuming but worthwhile in the long term.

Finally, you should consider how to take advantage of these biases in other people. Warren Buffett bought bonds in Seabrook Nuclear Plant because he did the extra work to show that it was viable while its sister plant was not. Other bondholders merely saw the vividness of the failure of its sister plant and quickly exited without adequate research. Deep value investors take advantage of events bias—where investors overlook the greater cumulative opportunity of a basket of stocks, focusing instead on the odds of success for each individual stock—as noted earlier. The biases you personally exploit should be based on your own strengths. The only way to do that is with deep reflection followed by lots of trial and error.

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