ADDING VALUE

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There are many books written on the emotional behavior characteristics of investors. Since none of us are immune to the strong tendency to "go with the flow," both Greg and I spend a lot of our personal time reading and trying to avoid herd behavior.

If you want to learn more about the behavioral tendencies of investors, there are a plethora of books that address the subject, including some standouts:

Ariely, Dan. <u>Predictably Irrational</u>. 2008.

Chu, F.J. Paradigm Lost. 2001.

Kindleberger, Charles. <u>Manias,</u> <u>Panics, and Crashes.</u> 1978.

Montier, James. <u>The Little Book</u> of Behavioral Investing. 2010.

Soot, Amit, M.D. <u>Log On: Two</u> <u>Steps to Mindful Awareness</u>. 2009.

Zweig, Jason. Your Money & Your Brain. 2007.

ADDING VALUE is mailed quarterly to our clients and friends. The intent of this publication is to share some of our more interesting views and research with our clients.

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HUMAN BRAIN WAVES

This seems like an appropriate time to reflect yet again on the lessons that we learned in 2009. If we made some errors in our interpretation of the chaotic financial situation in 2009, we can examine those problem areas and make some corrections and/or get a better handle on our behavioral tendencies. It has long been known through the annual Dalbar studies that investors exhibit harmful behavior. These studies measure the actual returns achieved by investors rather than the returns from a passive index or the returns reported on the fund through a service such as Morningstar. They also capture the degree to which investors attempt to time their entry and exit from the market. Over the last 20 years, the S&P has generated just over 8 percent on average each year. Equity fund investors have managed to reduce this to a paltry 1.9 percent per annum. Over long periods of time, the compounding of this difference is so enormous that it means that retirement is possible, or that we must work well past the expected retirement timeframe to have the capital we need in retirement. In addition, advances in technology and medicine have contributed to a significant rise in life expectancy during the past few decades, such that the implications for retirement liabilities are profound. The seriousness of these problems and their long-term implications behooves all of us to think clearly and dispassionately about how we make decisions about our finances.

The funny part about these mental errors, especially with respect to behavior tendencies, is that most people think it doesn't happen to them. They understand that these studies have been done and that the average American is likely to make the mistakes, just that they themselves are personally immune. The trait is so common that it is called the "bias blind spot." Many academics postulate why there is a blind spot and the most common explanation is evolution. Our brains are evolving at a glacial pace from being irrepressibly human (hunter-gatherers/automatic-effortless) to letting logic drive the decisions (think the Vulcans of Mr. Spock fame). The glacial pace of our brain development may be ill-suited for the information age in which we currently live. We are called upon to make financial decisions from a constant stream of information much of which is emotional, not logical. Logical processing requires a deductive approach, one step at a time, a slow and serial way of dealing with information. Rarely do we have the luxury of using this process; making slow, deliberative decisions in our world implies retardation and difficulty in dealing with multi-tasking sys-Good investors have to train themselves to find the fine line between reactionary and deliberate.

Fortunately for us, James Montier in his recently released book, The Little Book of Behavioral Investing, has found a scientist who has developed a simple three question system to measure which part of our brain reacts more strongly-the logical or emotional. There is no more hiding our bias blind spot. All we have to do is answer correctly three ques-The three questions form a task tions!! known as the Cognitive Reflection Task (CRT). We'll present the questions of the task now and the answers at the end. Just remember—no more excuses. The answers to these questions will ascertain whether you are emotional or logical in your financial decision making.

The questions developed by Shane Frederick of Yale (formerly MIT), which are considered to be more powerful than any IQ test or SAT score, and have already been administered to nearly 3,500 people are as follows:

- 1. A ball and a bat together cost \$1.10 in total. The bat costs a dollar more that the ball. How much does the ball cost?
- 2. If it takes five minutes for five machines to make five widgets, how long would it take 100 machines to make 100 widgets?
- 3. In a lake there is a patch of lily pads. Every day the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long will it take to cover half the lake?

Write your answers down so that you have a permanent record of your decision. We'll let you know the answers soon.

Why is this important? We kiddingly (but with a definite undertone of seriousness) say that we spent much more time dealing with behavior issues in 2008-09, than in financial analysis of the capital markets. For all of us, our human characteristics in the time of a severe crisis dominated our logical mental processing. If a cobra behind a glass cage in the zoo rears its head and strikes the glass as you stand in front of it, you flinch immediately. I don't know if it is humanly possible not to flinch (even if you are not afraid of snakes). After you recover from your initial reaction, you can analyze the situation more rationally. The glass is thick, no one has ever been attacked at the zoo, there are no cracks in the glass, etc., but by then the damage is already done—you already have backed away. As Mr. Montier points out, from a survival point of view, a false positive is a better response than a false negative. "Emotion is designed to trump logic."

It is important to understand that our behavioral tendencies do not differentiate between physical or mental. As we back away from the snake, so too do we back away from perceived danger in our financial condition.

But on this one-year anniversary of the low point in the equity markets for this particular financial crisis, it might be interesting to see who didn't back away from the perceived danger. We calculated the internal rate of return of representative managers from 3/09/09 to 3/09/10. For various reasons, not all clients will have these managers, but most will have some of the managers represented. These managers used the logical, not emotional, parts of their brains, and their ingrained training, to take advantage of the opportunities that were presented during the period of fear.

A sampling of the one-year return for the period ended 3/9/10 for some of these managers is as follows:

<u>IRR</u>
91%
91%
70%
100%
144%
100%
120%
103%
95%
90%
86%
97%
70%
100%

By any measure, these are impressive results. As we continue our introspection on the financial crisis, it is important to review the differences between the reactions of these managers listed above and your personal behavior. Like the striking cobra (behind glass), the professional manager responses to the crisis exhibited a much different reaction than the average. When other people are in a state of fear and shock, the investment manager turns efficient. Professionalism takes over and is rigorously channeled into work. Dr. Amit Sood states in his book, Log On: Two Steps to Mindful Awareness: "In the state of mindlessness you experience non-anchored awareness with little attention and excessive interpretation. In this state you spend a large part of your time within you mind, jumping from present to past to future. Your attention is often captured by attention black holes. You have a propensity to think an exhaustingly large number of rapidly appearing and dissolving thoughts...You are stuck in duality, categorizing everything based on your prejudices and egocentric preferences. mindless you interpret excessively and spend little time attending...Mindless state is very energy intensive, unhealthy, and not conducive to peace or happiness over the long term."

Dr. Sood graphically interprets the "four states of awareness" as follows:

The Four States of Awareness

Attention	Attention	Attention	Attention
Interpretation			
	Interpretation		
		Interpretation	
			Interpretation
Mindlessness	Attentive	Mindful	Awakened

It is our belief that we have to train ourselves to increase our attention to detail and reduce our mindless interpretation of events. In the frenetic 24/7 environment in which we live, with its daily dose of day trading minutia, we seem to be regressing, not moving forward. Thankfully, the training and experience of the managers in your portfolio did not succumb to the crisis. Instead, they were "mindful and awakened" during the crisis.

With this example in mind, let's return to the original questions. Each of the questions has an obvious, but unfortunately, wrong answer, and a less obvious but nonetheless correct answer. All correct answers required attention to detail. As mentioned earlier, the test has already been administered to 3,500 people, but the researcher has found that only 17% of the test takers have managed to get all three questions correct. Further, 33% have gotten none right! The best performing group so far has been MIT students, and their record is 48% correct. This leads us to state the obvious that some of the best students in the world still don't qualify at the 50% mark. Of the 600 professional investors who have taken the test, about 40% have gotten all three questions correct, and 10% didn't get any right. Let's hope that *your* professional advisors outperformed the record-breaking MIT students and not the latter group, but we'll never tell!

Now the answers:

In question #1, the quick and dirty system favors an answer of \$0.10. However, a little logic shows that the correct answer is actually \$0.05 and here is why.

1 Bat + 1 Ball = \$1.10 1 Bat = (Ball + \$1.00) (Ball + \$1.00) + 1 Ball = \$1.10 2 Balls = \$0.10 Therefore, 1 Ball = \$0.05

In question #2, the gut reaction is to say 100 minutes. However, with a little reflection we can see that if it takes 5 machines five minutes to produce 5 widgets, the output is actually one widget per machine every 5 minutes. As such, it would take 100 machines five minutes to make 100 widgets.

In question #3, the most common incorrect answer is 24 days (one-half of 48). However, if the patch doubles in size each day, the day

Wright Associates 1500 Oxford Dr., Suite 230 Bethel Park, PA 15102 before it covers the entire lake, it must have covered half the lake, so the correct answer is 47 days.

The moral of this story is that all humans are prone to decision making by short circuit. We strongly want to take complex information, with myriad layers of country specific globalized inputs, and circuitous, unreported financial reporting abnormalities and reach an educated conclusion in five minutes. There is a strong correlation to this process with other behavioral biases such as loss aversion, conservatism, and impatience. Hence, if we can't figure it out, we just want out, and we will work it out another day. As Warren Buffett has stated: "Success in investing doesn't correlate with IQ once you are above the level of 100. Once you have ordinary intelligence, what you need is the temperament to control the urges that get other people into trouble in investing." Easier said than done!!

Happy Spring to all.

Respectfully yours, Kathleen S. Wright, CFA A. Gregory Lintner, CFA