Investing – Reflections on How People Think (Or Don't)

"Think left and think right and think low and think high. Oh, things you can think up if only you try."
– Dr. Seuss

There is a long history of thought and literature on the irrational nature of human beings. In 1841, Charles Mackey wrote *Extraordinary Popular Delusions and the Madness of Crowds*. Barbara Tuchman's *The March of Folly* (1984) details the poor decision-making surrounding wars from the ancient Greeks in Troy to the United States involvement in Vietnam. More recently, Daniel Kahneman's book, *Thinking, Fast and Slow* is an excellent summary of his research on cognitive science and decision-making. In this work, Kahneman describes the two competing systems in the brain – one automatic and impulsive and the other deliberate, conscious and logical – and shows how decisions about money are affected by these systems. Kahneman won the 2002 Nobel Prize in Economics for his body of research in this area, much of which he conducted with his partner Amos Tversky, who famously said, "We study natural stupidity, not artificial intelligence."[1] Their research takes us through how we process complex information, and the cognitive errors individuals, even extremely smart people, make on a regular basis. These issues can cause much grief in the management of our lives and finances.

The idea that humans are often irrational and imbued with questionable decision-making skills is hardly news, but many professional investors and economists fail to appreciate this basic human trait. An unfortunate, but famous, example is Alan Greenspan, a proponent of the lax regulation which led to the mortgage crisis. As Mr. Greenspan said: "I originally assumed that people would act in a wholly rational way. That turned out to be wrong."

The good news from the world of neuroscience is that the brain can improve more than we realize. As artist Jeff Koons said: "People assume they are most creative at a certain age. But if you look at truly great artists, they always get better. Matisse got better. Picasso got better. Da Vinci got better. I think it's the same in all areas of creativity." Knowledge builds on itself. In *The Brain that Changes Itself*, a study of neuroplasticity, or the brain's ability to change throughout a person's life, Norman Doidge observes:

> At seventy-eight, Benjamin Franklin invented bifocal spectacles. In studies of creativity, H.C. Lehman and Dean Keith Simonton found that while the ages thirty-five to fifty-five are the peak of creativity in most fields, people in their sixties and seventies, though they work at slower speed, are as productive as they were in their twenties. When Pablo Casals, the cellist, was ninety-one years old, he was approached by a student who asked, 'Master, why do you continue to practice?' Casals replied, 'Because I am making progress.'

So how does all this apply to investing? Rationality and "slow thinking" are crucial to good decision-making. Investors should neither be blinded by technology nor governed by fear. Experience helps and our decisions can improve over time. Top professional athletes, doctors, lawyers, and business owners understand that education and training are not enough -- they have to "practice" by being in the situation for which they have trained. Only by being tested lots of times by the storms of their trade can someone "practice" a craft enough to master it. This is a key aspect of successful money management. In investing people are often too anxious about losses, too greedy for gains, too distracted, avoid making decisions, calculate too much or too little, and ignore history. We are

[1] Unfortunately, Tversky died before the Nobel was announced and therefore was not included in the award.

endeavoring to use these lessons in our day-to-day portfolio management activities. In this letter we address certain areas where we think the human mind commonly misunderstands investing and irrationality wins out, and we suggest good mental habits to counteract these tendencies.

Math alone does not a rational investor make

"As far as the laws of mathematics refer to reality, they are not certain;
and as far as they are certain, they do not refer to reality."
– Einstein

Mathematic patterns underpin our natural world and math drives our progress, even in areas that might surprise us. For example, da Vinci and other painters couldn't have created their breakthrough paintings without advances in geometry, which is how they learned to add depth.

The technological revolution has brought math to the masses; it's amazing to think that most of us carry around the equivalent of a super computer from twenty-five years ago in our back pockets. However, evolution does not keep pace with technology, and the human brain is basically the same as it was thousands of years ago, when Aristotle said: "There is a foolish corner in the brain of the wisest man." Computers and math cannot create a rationality that most humans lack.

The inability of quant investment models to handle irrationality well in the longer term is why -- to pick two famous examples -- Long Term Capital Management and lots of mortgage investing strategies worked until they didn't. Both of these quant-based fiascos highlight the point of Burrhus Frederick Skinner that "the real problem is not whether machines think but whether men do." As mathematician Jim Simons (arguably the world's most famous quant trader) acknowledged in *The New Yorker*, "longer-term trading makes algorithms less useful. It's like the weather, . . . the nearer in, the higher the certainty."

Framing the world in numbers can cause investors to believe that predictions made by a computer are more reliable than they actually are. Lots of calculations can create a false sense of security. Numbers can be misstated or obfuscated and the programming assumptions may be wrong. At least currently, we don't think math and computers can predict the long-term performance of businesses and investments with a great deal of accuracy.

There is a tension as well between numbers and creativity. We think Gary Kasparov has it right that "there's only one thing that only humans can do, and that's dream, so let us dream." The application of this to investing is direct, and Bernard Baruch told us why: "I get the facts, I study them patiently, I apply imagination."

Technology causes shorter attention spans

Unfortunately, patience is a increasingly scarce commodity in our world. Apple's head of software engineering recently said that iPhones have become "such a habit that we might not even recognize how distracted we've become." In fact, if you glance at a text message, research shows it disrupts your thought process from six to twenty-three minutes -- obviously this distraction makes it much harder for investors to patiently study the facts at hand.

Yet multitasking just accelerates. As Adam Gazzaley and Larry Rosen put it in *The Distracted Mind – Ancient Brains in a High-Tech World*:

> New media also facilitate constant switching. Smartphones, desktops, and laptops support multiple apps while web browsers allow numerous simultaneously open tabs and windows, making it increasingly difficult to attend to a single website or app without having our attention lured away. This new pattern of engagement extends to the way we use different types of media. There is a well-documented and growing tendency for many of us to 'media multitask.' For example, a study … found that the typical teen and young adult believes he or she can juggle six to seven different forms of media at the same time. … Several studies have reported that U.S. adults and teens check their phone up to 150 times a day, or every six to seven minutes while they are awake.[2]

Relentless distraction is the enemy of sound money management. As Mr. Munger stated at his annual presentation I enjoy attending in Los Angeles: "Multi-tasking is great if you're the chief nurse in the hospital, but not for investing."

In addition to inhibiting patient study of the facts, we feel that shorter attention spans lead to more trading, which is almost always an enemy of good returns. The longer I've been managing money, the more convinced I am that fewer decisions are better – the more changes you make, the greater the chances of making mistakes. We think investing should be reading-intensive, not trading-focused.

Impulsive thinkers misconstrue risk

At first blush, cash, bonds and other currency-based investments appear to be completely "safe," but a more patient, thoughtful analysis shows them to be anything but. A lot of wealthy Americans had the same amount of principal in the mid-1980s that they had in the late 1960s, but what they could buy with their money had declined dramatically because of the effects of inflation.[3] Liaquat Ahamad, author of "Lords of Finance," a superb economic history of the late 1920s and early 1930s, reports that most economists think you need $200 today to equal the buying power of $1 in 1930. We think this commentary from Warren Buffett's 2011 letter explains inflation risk very well:

> The riskiness of an investment is not measured by beta (a Wall Street term encompassing volatility and often used in measuring risk) but rather by the probability – the *reasoned* probability – of that investment causing its owner a loss of purchasing power over his contemplated holding period. Assets can fluctuate greatly in price and not be risky as long as they are reasonably certain to deliver increased purchasing power over their holding period. And as we will see, a nonfluctuating asset can be laden with risk.
>
> . . . . .

[2] Ironically, while they profit from hooking the masses on media gadgetry, the titans of technology often strive to keep their own children away from these devices. In *Irresistible: The Rise of Addictive Technology and the Business of Keeping us Hooked*, Adam Alter reports that "in late 2010 [Steve] Jobs told *New York Times* journalist Nick Bilton that his children had never used the iPad. 'We limit how much technology our kids use in the home.' Bilton later discovered that other tech giants imposed similar restrictions.

[3] As Jay Leno said: "Congress wants to replace the dollar bill with a coin. They've already done it: It's called a nickel."

> Investments that are denominated in a given currency include money-market funds, bonds, mortgages, bank deposits, and other instruments. <u>Most of these currency-based investments are thought of as "safe." In truth, they are among the most dangerous of assets. Their beta may be zero, but their risk is huge</u> [our emphasis].
>
> Over the past century these investments have destroyed the purchasing power of investors in many countries, even as these holders continued to receive timely payments of interest and principal. This ugly result, moreover, will forever recur. Governments determine the ultimate value of money, and systemic forces will sometimes cause them to gravitate to policies that produce inflation. From time to time these policies spin out of control.
> …
> "In God We Trust" may be imprinted on our currency, but the hand that activates our government's printing press has been all too human.
>
> High interest rates, of course, can compensate purchasers for the inflation risk they face with currency-based investments – and indeed, rates in the early 1980s did that job nicely. Current rates, however, do not come close to offsetting the purchasing-power risk that investors assume. Right now bonds should come with a warning label.

A "slow-thought" approach to money management shows equities, on the other hand, to be a less risky choice for investors with a long time horizon. As Mr. Buffett noted in the 2017 Berkshire letter:

> <u>In *any* upcoming day, week, or even year, stocks will be riskier – far riskier – than short-term U.S. bonds.[4] As an investor's investment horizon lengthens, however, a diversified portfolio of U.S. equities becomes progressively *less* risky than bonds, assuming that the stocks are purchased at a sensible multiple of earnings to then-prevailing interest rates</u> [our emphasis].
>
> It is a terrible mistake for investors with long-term horizons – among them, pension funds, college endowments and savings-minded individuals – to measure their investment "risk" by their portfolio's ratio of bonds to stocks. <u>Often, high-grade bonds in an investment portfolio *increase* its risk</u> [our emphasis].

Loss aversion is a concept discussed by Kahneman as having a powerful impact on our decision making, and it is primarily an emotional, not rational response to a situation or problem, especially in money management. Serious gamblers generally do not experience loss aversion, they only consider the "big score," which as we all know can often lead to disaster. However, to not take reasonable risks also courts disaster over the long term in investing. To be sure, loss of principal is a bad thing, but over time loss of purchasing power is really the issue.

Attempting to time the stock market is irrational

Advances in brain scans have revealed that the part of the brain that reacts to falling stock or bond prices is the same part of the brain that activates when you see a lion or tiger – or more likely around New York, a bear. Letting the automatic, impulsive part of your mind govern your actions in a

---

[4] Obviously, stocks can be riskier than short-term bonds for multiple years too, but the longer the time period the more the aforementioned advantages of owning growing productive assets as well as the inflation tax come into play, and we feel the safer stocks become relative to bonds.

falling market is not the path to successful investing. We aren't suggesting fears shouldn't be considered, but we agree with what Samuel Johnson said in the 1700s: "Fear is implanted in us as a preservative from evil; but its duty, like that of other passions, is not to overbear reason, but to assist it." This is a wise aphorism and as always is easier said than done. Kahneman's premise is that this is what "slow thinking" is all about. Fast thinking is the intuitive and rapid type of thinking that can mislead us and at times this can have serious consequences. Slow thinking is resisting intuitive but incorrect solutions to problems and guarding against irrational fear based responses.

While neuroscience may help explain the why of market pull-backs, it can't predict the when. As Mr. Buffett puts it: "*No one* can tell you when these will happen. The light can at *anytime* go from green to red without passing at yellow."

Perhaps the reason why major stock market drops are so hard to predict is that the returns of the market are concentrated in a remarkably small number of days. Over the years, we've seen a number of studies on this topic, but most recently *Fortune* wrote that "from 1997 through 2017, the S&P 500 returned 7.2% annually. But if you had been on the sidelines, for whatever reason, and missed the markets' 30 best days – a tiny fraction of the 5,217 trading days during the 21-year span – your stock portfolio would have *lost* 0.9% annually." It's worth noting that two of the four major drops of the past fifty years (Summer 1998 to Spring 2000 and Fall 2008 to Spring 2009) took place during this period, and yet, the overall returns were still reasonable. So if someone claims they can predict market hiccups, we say exactly how can this be done? What forecaster can guess today when these 30 good days will be over the next 21 years?

Viewed this way, one realizes that despite the non-stop parade of commentators in the media claiming they can predict the market's ups and downs, the overwhelming evidence is that it is cognitive error to try. <u>We believe we just have to accept with equanimity that from time to time the market is going to have big drops</u>. And when the markets do drop, remember that Wall Street is the only place where buyers disappear when top-notch merchandise is heavily marked down. Ben Graham, certainly one of the most brilliant investment thinkers of the past century, summarized this as follows: "The stock market functions as a voting machine in the short run, it acts as a weighing machine in the long run." Crowd psychology garners the votes, free cash flow generated stacks up the weights.[5]

Dealing with irrationality – read, keep an open mind, be curious, focused, patient and happy

Understanding how our brain's tendencies can sabotage financial decisions, we have identified the following interconnected habits that we believe can greatly help folks achieve investment success:

Read

Knowledge builds on itself. Charlie Munger said: "In my whole life, I have known no wise people … who didn't read all the time – none, zero." Really enjoying reading a lot about business and investing is, in our opinion, a requirement for success in long-term investing. Or as Einstein put it: "Wisdom is not a product of schooling but of the lifelong attempt to acquire it."

---

[5] Currently, folks are infatuated with some technology oriented areas of the market, but as Mr. Buffett has pointed out: "Only when the tide goes out do you see who is swimming naked."

Keep an open mind

We are investment polygamists – we don't think there is any one approach to success. Certainly we follow the proverb that the first rule of fishing is to fish where the fish are. This means, for example, we favor companies with insider buying, purchasing their own stock, and spin-offs over businesses doing lots of acquisitions, which we generally feel perform poorly. But that doesn't mean we won't research those businesses occasionally. If you go back in American business history, there are lots of examples where the exception was well worth researching. Perhaps the first industry roll-up was the American News Company going public on the N.Y.S.E., buying out the other major newspaper and periodical distributors in the late 1860s, thus creating a profitable and long-lasting monopoly lasting many decades.

Furthermore, industries change, as do barriers to entry, *i.e.,* competitive moats. At the beginning of my career I viewed railroads and airlines as terrible businesses, but as the competitive dynamics of both evolved, I now think they're broadly attractive. The original Silicon Valley was Scranton, then Cleveland, later New Jersey. A key is to approach any investment through different prisms -- remembering always that what works to analyze one business may not be applicable to another.

At the end of the day, we want to avoid what Machiavelli identified as the "tragedy of man – circumstances change, but he doesn't."

Be curious

Walter Isaacson feels that a common thread among Leonardo da Vinci, Ben Franklin, Albert Einstein and Steve Jobs is being really curious – having a child-like sense of wonder about the world. Samuel Johnson felt "curiosity is one of the most permanent and certain characteristics of a vigorous intellect." Being curious in investing surely helps identify new technologies, see what managements are really doing, and in countless other ways.

Be focused

There is so much information available today, it can be overwhelming. A crucial strategy is to be realistic about what you understand and stick to those areas. Equally important is to remember that investing is like a baseball game where the opponent pitches all year long and you only have to swing at the easiest pitches – it's a psychological skill, though, as there always will be a peanut gallery telling you to swing. People urging you to follow the herd. In addition, just waiting for the easy pitch can be tedious, but remember, there's nothing boring about making money. Even better, the fat pitch tends to be safer.

Be patient

In *Reminiscences of a Stock Operator*, a fictionalized account of the trader Jesse Livermore, he said "It was never my thinking that made the big money for me. It was always my sitting. Got that? My sitting tight!" Mr. Munger also addressed this topic when he stated that the "big money is not in the buying and selling, but in the waiting." As *The Financial Times* wrote "Charlie Munger has described how he is perfectly happy to hold on to shares in strong businesses even if he believes they have become expensive. 'Psychologically, I don't mind holding a company I like and admire and I trust and

know that it will be stronger than now after many years,' he has said. 'And if the valuation gets a little silly, I just ignore it. So I own assets that I would never buy at current prices but I am quite comfortable holding them.'"

Be happy

If a person really enjoys something they are going to be better at it. The best investors have a real passion for what they do and enjoy the process – a lot. As Hegel highlighted, "nothing great in the world has been accomplished without passion." We believe that happiness in the investment process leads to success, not the reverse. Shawn Achor, in *The Happiness Advantage: The Seven Principles of Positive Psychology That Fuel Success in Performance at Work*, found that:

> Instead of narrowing our actions down to fight or flight as negative emotions do, positive ones broaden the amount of possibilities we process, making us more thoughtful, creative, and open to new ideas … Recent research shows that this "broadening effect" is actually biological; that happiness gives us a real chemical edge on the competition. How? Positive emotions flood our brains with dopamine and serotonin, chemicals that nor only makes us feel good, but dial up the learning centers of our brain to higher levels. They help us organize new information, keep that information in the brain longer, and retrieve it faster later on. And they enable us to make and sustain more neural connections, which allows us to think more quickly and creatively, become more skilled at complex analysis and problem solving, and see and invent new ways of doing things. We even quite literally see more of the world around us when we're feeling happy.

Above all, though, successful investing requires lots of thought. As George Bernard Shaw said: "Few people think more than two or three times a year; I have made an international reputation for myself by thinking once or twice a week." If you do this thinking logically and rationally, we think Bill Walsh was right: "The score takes care of itself."

As always, please call or email us with any questions or comments that you have,

Chris

P.S.

Don't forget it's always good to be lucky!

<u>Things to Note</u>

This letter contains the current opinions of the author, and Fields Gottscho Capital Management, LLC; such opinions are subject to change without notice. This letter is distributed for informational purposes only. References to particular investments or types of investments are for illustrative purposes only and are not recommendations to buy or sell such investments. Nor are these references indicative in any way of performance returns in the accounts we manage. Forecasts, estimates, and certain information contained herein are based upon proprietary research and should not be considered as a recommendation of a particular security, strategy, or investment product. Information contained herein has been obtained from sources believed to be reliable, but is not guaranteed.

Past performance is not a guarantee or a reliable indicator of future results. Equities may decline in value due to both real and perceived general market, economic, and industry conditions. Bonds may decline in value due to market, interest rate, issuer, credit, and inflation risk. Investing in foreign denominated and/or domiciled securities may involve heightened risk due to currency fluctuations, and economic and political risks, which may be enhanced in emerging markets. Commodities contain heightened risk including market, political, regulatory, and natural conditions. There is no guarantee that these investment strategies will work under all market conditions or are suitable for all investors and each investor should evaluate his or her ability to invest long-term, especially during periods of downturn in the market.