

Thunderbolt - By a Nose!

During our senior year in college, a few of my math major friends and I decided to put our education to good use by developing a system to pick winners in horse races. In the campus library, we scoured microfilms of past issues of *The New York Times* sports section, analyzing the results of past races. We came up with a mathematical formula that weighted jockey and horse ratings in a manner that seemed to yield excellent results. The statute of limitations has expired so I feel like it's okay to admit that, as far as I can remember, this was the only reason I ever went to the library during my undergraduate years.

Soon after graduation, full of confidence, we went to a thoroughbred race track in the New York metropolitan area. If my memory is correct, there were ten races that day. For the first race, our formula produced a clear favorite. So we went to the betting window and each put a \$2 bet on Thunderbolt. We then proceeded to the grandstand, eager to discover if an undergraduate degree in mathematics had any practical value in the real world.

And they're off! To our great dismay, Thunderbolt started slowly and was mired in the middle of the pack. Then in the final turn he put on a burst of speed. To our glee and righteous vindication, Thunderbolt caught and then passed the horse that was in the lead. Thunderbolt, by a nose! We hooped and hollered and ran to the betting window to collect our just rewards. For the remainder of the afternoon our brilliant formula produced nine consecutive losers. One horse I clearly remember was a gray speckled nag that started the race in last place and fell back from there.

Several lessons can be learned from our attempt to outsmart the rest of the racing world. And the traps that snared us are similar to those that can snare individual investors.

Overconfidence - Research in the relatively new subject of behavioral finance (why investors do what they do) makes it clear that we often are our own worst enemy. We like to think that we are rational beings making investment decisions only after a disciplined analysis of risk versus reward. But fear and greed are always lurking just under the surface and greed often expresses itself as overconfidence. We believe that we have an above average ability to invest successfully and generate returns that beat the market average. But this displays a naïve disregard of the impossible odds we face. The Wall Street game is controlled by professionals. They make the rules, they have first access to new information, they're playing with other people's money and they are studying 24/7. You, on the other hand, are an amateur. It's a game you can't win; it's not even a fair fight. That's why Wall Street makes it so easy for you to trade online. Anyone telling you otherwise has something to sell you. This overconfidence certainly applied to us, we assumed that our knowledge of mathematics would lead us to a formula for picking winners hidden from everyone else.

Fooled by randomness - Our minds were designed to discern patterns in the world around us. This ability has produced the scientific method and all the advancements in science, engineering, medicine and mathematics. Unfortunately, we can be lead astray when we see "patterns" that are not there but are just the results of random chance. Let's call them cognitive illusions - they're like optical illusions in your brain. Here's one - which of the following patterns of heads and tails in a coin toss would be harder to achieve?

H H H H H H H H H H H H H H or H T T H T T H T H H T H

Each has the same probability of occurring - the first series is deceptive. The consecutive heads create a cognitive illusion that something unique is occurring. But both patterns are equally random. My friends and I were fooled by randomness in the first race, irrationally assuming that winning one in a row meant that we were Mathematicians of Destiny. But our success was nothing more than pure luck.

Individual investors place too much emphasis on recent past performance of an investment. We tend to extrapolate this performance into the future in forming investment decisions. It doesn't matter if an investment has been going up or down in price, there's usually enough evidence to support the belief that the trend will continue. But the shorter the timeframe, the more likely that randomness or chance is the cause

of the results. The recent housing bubble is a case in point. Those who ignored the obvious risk of sub-prime mortgage backed securities were quick to point out that the average price of homes in the US had risen every year since the 1930s. But why did anyone believe that because home prices hadn't declined in the last 75 years that this meant that they could never again experience a significant decline?

I don't trust any performance data of less than five years. And five years is a very short timeframe. Unfortunately, we have less than a century's worth of good data for US stocks and bonds. It's not uncommon to discover that ten year data doesn't even exist for many investments. Therefore, many investment decisions are made after analyzing insufficient data. Consider the poor turkey. He grows up being fed every day by humans. His experience leads him to believe that every time they approach his pen they will bring food. "How lucky can a turkey be?" he asks himself. Then, one day just before Thanksgiving, he learns the hard lesson that past performance tells us very little about what the future holds in store.

I've always believed that a sign of wisdom is being smart enough to know when you've been lucky. Unfortunately, our brains lead us astray, causing us to see trends that, more often than not, are just random market returns. Every mutual fund company makes a bet on cognitive illusions when they advertise past performance in the hope that you will believe that manager skill, not randomness, was the cause.

Data mining. The stock market generates endless amounts of data. Data mining describes the dishonest and deceptive practice of analyzing past data to develop an investment strategy that would have produced market beating returns during the timeframe studied. In other words, data mining gives us a clear picture of what we wish we had done, instead of what we did - if we only knew then what we know now.

The fatal flaw in all such analysis is that, to the dismay of all economists, the interaction of hundreds of millions of human beings can never be formalized mathematically. Data from the past cannot predict the future. Just ask Mr. Turkey. We created a formula that would have worked well in the past and headed to the race track full of naïveté and hubris. We didn't know why our formula worked in the past and could only hope that it would flourish in the future. Why should anyone believe that a strategy that would have beaten the market yesterday will do so tomorrow? "Because it worked in the past" is an exercise in circular logic and not an acceptable answer. Investment infomercials peddle market beating strategies that are nothing more than the illegitimate offspring of data mining. Not any different from our trips to the library to check past race results. In the end, we learned the lesson that data mining offers little hope of success. Fancy mathematics cannot pierce the veil of the unknown future, where only uncertainty is certain.

Speculation - The academic research in behavioral finance as well as my own experience with individual investors has convinced me that we often fool ourselves into believing that our speculations are actually well thought out and prudent investment ideas. It's easy to fool yourself into thinking that because you've spent some time studying this, that, or the other thing, that you've gained insight and an edge over everyone else. But individual investors are, let's admit it, largely ignorant of business operations and valuations. We usually make investment decisions in response to short-term price fluctuations - often reacting emotionally to insignificant events. Far too often, investors are mere crowd followers - buying because prices have risen and selling because they have fallen.

When I started managing other people's money I promised myself that I would never make an investment recommendation based on a hunch that I had about anything. And despite temptations to the contrary, I refuse to speculate with my own money. Why? Thunderbolt. Speculations that succeed by random chance can do funny things to your mind. With a couple of successes under my belt it wouldn't be long before I'd start believing that I was smarter than the average bear. How many investors are in a financial crisis today because their first speculations worked out well, encouraging them to continue? They assumed that they were above average investors, only to be ruined by their subsequent speculations.

What defenses do we have against these weaknesses?

The first line of defense is to admit that the future is a mystery and forgo all attempts to predict it. If we could see into the future, the word surprise would not be in the dictionary. But the future is the place where surprises reside. Too much academic research in the financial planning community today uses computers to crunch past data in a vain attempt to predict the future to two decimal places. But I believe that clients would be better served if financial professionals start painting with a broader, big picture brush. It will be easier for clients to understand and I don't believe we'd be lowering the quality of our advice or lessening the chances that clients will attain their financial goals. Our day at the races taught us a valuable lesson -- one

that fortunately didn't cost too much. That the future cannot be mathematically predicted and that random chance often shows up at the masquerade ball disguised as Einstein. One reason that I'm such an advocate of index investing is that I never have to play the "What will happen next?" game. And that's a relief because the answer, more often than not, is - the unexpected.

The second line of defense is a written financial plan that identifies a target rate of return necessary for the investor to attain personal financial goals. The plan factors in investor time horizon as well as risk tolerance to produce an appropriate asset allocation for the client's portfolio. The plan must have a built in flexibility to account for unexpected future events, because life will not happen just as we planned.

Annual rebalancing is our next line of defense. It protects our portfolios from regression to the mean -- a fancy mathematical term that means what has gone up will go down and what has gone down will eventually go back up. Annual rebalancing to original allocation percentages forces the investor to sell what has gone up in price and buy what has gone down in price. Sometimes, regression to the mean seems to have disappeared from the scene but that doesn't mean it's not lurking just around the corner. Every financial bubble bursts when regression to the mean sleeps through the alarm, wakes up and says "I'm late; I'm late, for a very important date!"

The fourth line of defense is realizing that trying to outperform the market is a loser's game. This is a hard pill for many financial advisors to swallow. They've bought into the fallacious idea that they must justify their fees by finding investment managers or mutual funds that can outperform the market. This is sheer folly, they are making a promise that they cannot keep. They might as well promise sunny days for their clients' 4th of July picnics. Wall Street will never admit that average market returns have been sufficient for most investors to meet their financial goals. Their business model is greed focused - acting as if there is no such thing as "enough". It seeks to gather client assets by offering exciting new products to beat the market and has little concern with whether or not clients attain their financial goals. On the other hand, good financial planning is goal focused. Its concern is primarily on preparation and protection, not predictions or performance. It helps clients organize their lives and assets to achieve their goals with the least amount of risk exposure. It's not an exciting message but one that is more rewarding to both the advisor and the client.

Quiz Time

Santa has left a Christmas puzzler for us under the tree - "When is 50 three times 25?"

Let's assume you start out with a \$1000 investment. If it goes down 25%, you'll be left with \$750. In order for the \$750 to return to its original value, it will have to grow by \$250 - a gain of 33.3%.

But what if your \$1000 investment declined 50%? You'd be left with \$500. In order for the \$500 to return to its original value, it will have to double, a 100% rate of return.

So, a 50% loss is three times worse than a 25% loss when taking into consideration the rate of return necessary to get back to even. (33.3% vs.100%). The question that every investor has been asking lately is "How long will it be before I get back to even?" The answer is different for everyone and a lot depends on whether or not you continued to invest in equities during the market decline. If you did, you own more shares of your stock funds than ever before and your account value will recover before the market does. But the larger the percentage decline, the longer it's going to take. This unpleasant fact explains my constant emphasis on downside protection. It has nothing to do with markets, the economy, who is President, the rate of inflation, or anything else that CNBC obsesses about on a daily basis. It is simple middle school arithmetic. The rate of return needed for recovery is *always greater* than the percentage loss. Downside protection is, in my opinion, more important than upside potential. Will Wall Street ever place risk control ahead of performance? I doubt it. There's just too much money to be made peddling performance.

Another year has come and gone. Hopefully, the readers of this newsletter have received some nuggets of wisdom. There's only one thing left to say in 2009 -- Merry Christmas to all and to all a good night.

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