Your Money and Your Brain

How the New Science of Neuroeconomics Can Help Make You Rich

By Jason Zweig

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Our book this month was published recently, and has been one of my favorite reads over the last two years. Neuroscience has fascinated me for years. In the All Power seminar we have looked at this together on different topics. But this month, we are going to see how your thought patterns affect your financial outcomes. I think you'll find it fascinating and very enlightening.

The highlights of this book are as follows:

• Many investment "decisions" occur unconsciously. We do it by nature and because of this often produce devastating results.

• People often are unaware of the real reasons behind their actions. This month we are going to become aware and use this to your financial advantage.

• Reflexes that ensure survival are built into your nervous system and they can kill you in the financial markets. Yet you cannot prosper without them so you have to learn how to manage them.

• People have a <u>reflexive</u> brain and a <u>reflective</u> brain. You probably never heard this before, and you will learn how to use this to your advantage as well.

• There are not left-and-right brains, but there are above-and-beneath brains. It's one of the latest discoveries of neuroscience and when you see it, it will make a lot more sense than what you've been taught up to this point.

• Although the stock market is random, people tend to see patterns where they don't exist. This is simple human nature and must be overcome.

• Your neurons fire when you are surprised or afraid. This can cause you to take action when you shouldn't. We'll learn how to control that.

• Anticipation of financial rewards, also known as greed, stimulates more neural activity than actually getting a big payoff. It is a trap that many fall into, and again, must be overcome.

• Some professional investors use their feelings as reverse indicators–buying when they feel pessimistic, selling when they are optimistic. This has proven to be quite a profitable system for many people.

Research into the workings of the brain can help you become a better investor, and proper emotions can help you make money in the market. So what we are looking at this month is a behavioral and cognitive lesson in personal investing.

One of the main points of the book is a controversial one which implies that much of the conventional wisdom about investing is wrong. It suggests that we tend to think investors are rational analysts who work hard to understand the probable performance of their investments. The assumption is that the harder you work and the more you understand, the better you will do. But the book gives ample evidence showing that knowledge, understanding, and hard work do not necessarily correlate with investing success. The book says that success requires more than knowledge, reason and study. Here is why: The human brain does not make financial decisions strictly on the basis of financial gains and losses. Other factors are at work including surprise, happiness, fear, risk, greed, intuition, emotions and perceptions. The book also brings out that emotions are not the enemy of your reason, but rather that they are necessary and helpful, provided that you, as an investor know how to use them.

The popular notion that everyone has two brains has some truth. But the distinction between right and left brain is not as crucial as that between lower and upper brain or “reflexive” and “reflective” brain. It is important that we understand the difference between these two so let’s define each one individually.

• Reflexive – As the word defines, it is your reflexes and that part of your brain that produces an automatic reflex. The reflexive system is “primarily headquartered” under the cerebral cortex. It uses numerous processes of the brain and directs attention to things only when they present a significant threat or opportunity.

• Reflective – The reflective system operates in the prefrontal cortex of your brain, the part of the brain you use to analyze and plan. As the word implies, you reflect on things, information, situations, and world events, anything that might affect the outcome of what you are doing or thinking about doing.

The authors bring out that to be a really good investor you've got to use both parts of your brain. To use both parts of your brain effectively as an investor, they offer you the following tips.

• Trust your feelings – If instinct warns you against trusting someone, pay attention to it. Intuition allows you to process behavioral cues that logical analysis may miss. In some people this intuition is very clear, strong and distinct. For others it is much more subtle. Generally, the more outgoing and aggressive your personality, the harder it is to understand or feel this intuition.

Believe it or not, this was one of the most difficult things for me through my 20s and 30s. To just become aware of this voice inside my head was very foreign to me because I tend to act quickly and decisively. My wife, on the other hand, has the skill naturally. And after a number of years observing her, I began to see how powerful it is. So like all skills, this one can be learned. And it is a very powerful asset in your financial decisions.

As a side note, there is a saying: **"There may be nothing across the entire spectrum of human endeavor that makes so many smart people feel so stupid, as investing."** It would be laughable if it wasn't so true! Over three years, a Chimp flinging darts in the dark at a list of stocks has a 12.5% chance of outperforming the market average! The book asserts that a contributing factor to this is people not following their instincts.

• Don't select a financial adviser who doesn't "click" with you. A financial partner is a lot like a marriage partner. There are just certain people you will click with and others you will not. Don't hesitate to shop to find that person you click with. Then, make sure you do all of your homework on advisers. Check their credentials, background and references. Always ask them for their five-year track record of investment returns. If they are not willing to show this to you or if they come up with some kind of excuse then drop them. A good financial advisor will be able to show you a strong track record without hesitation.

• Understand and get to know your reflexes – In certain circumstances, your emotions and reflexes will be powerful such as during extreme bull or bear markets. When everyone in the market is in a panic, or there is massive selling, or a world crisis has just taken place, or negative news is on television it is easy to follow your reflexes which automatically jerk you in a certain direction. Be consciously aware so when this happens you can make sure that you engage your analytical reflective system and be wary of your instincts. During these times, you need to be in your reflective system in order to make good financial choices. This is one reason I do not watch the news on TV. It puts you in a wrong state of mind. I look at information online that is based on facts and numbers and try to reflect on the truth of what is going on.

• Question your judgments repeatedly. This is sometimes a bit of a challenge because the market moves fast, and sometimes in fact, often requires fast decisive action. But always pause one or two minutes and question your decisions. Your reflexive brain may portray decisions in ways that are easy for it to process, but such decisions may be wrong.

One of the best and most powerful tools to help you here is to test your assumptions. Don’t just question your beliefs and convictions, try to disprove them. This is a powerful technique for assessing and double-checking your decisions. Be hard on yourself and come up with every logical reason why it would not work or be a good decision.

• Use common sense. Beware of advertising. Financial advertising is designed to influence your feelings, reflexes and unconscious disposition. Over the years I have actually become hardened to advertising. One of the favorite games I play with my daughter as we are driving down the road listening to the radio is to critique all of the commercials. I ask her to listen to the commercial and tell me if she thinks it’s a good one or a bad one. (She’s only eight years old.)

Then we discuss whether the product or service is worth the money, do they have a hidden agenda, are they trying to just get your information to upsell you something later, is there another company or competition that has a better product or service, or is the problem they are addressing one you could solve yourself without their product?

The same is true with financial advertising. You can get a dozen financial “experts” sending you a solicitation for their newsletter that is full of things that appeal to your emotions and reflexes—97 out of 100 are that way. You can usually pick this up in the first few paragraphs. However the other day for example, I saw a newsletter that you could tell immediately was honest. It was based on very thorough and excellent research, and they showed their three-year track record on the front page. There was no hype and they offered a three month trial for free. I took it and within three days subscribed to it. It is one of the best newsletters I’ve ever seen.

The book lists a number of laboratory studies which indicated that <u>*anticipation*</u> of a financial reward is more powerful than the feeling of satisfaction when you actually receive the big payoff. Anticipation can move the stock market in strange ways. We see this every day. For example, when a company announced that it had begun to sequence the human genome, its stock soared in anticipation. But when the company’s chief scientist announced a year later at a White House press conference that the firm had completed the sequencing of the human genome, the stock collapsed. What happened?—nothing more than an end to anticipation. So what can we learn from this?

Anticipation of financial rewards is actually a form of greed. To manage this rather than letting it manage you takes following some very, disciplined principles.

1. Temper your anticipation with the knowledge that nothing is certain in the market. Be skeptical about people who promise sure things.

2. If you have a lucky strike in the market, don’t expect another. Don’t attempt to recapture the feeling of euphoria. Buy stocks only where you understand the business. It is better to make 3 good

profits in a year that are sure, than to allow greed to cause you to make 20 losses.

3. If you are greedy, set firm limits on what you risk. No matter what, use a sell stop and never, ever change your mind. This rule is critical for success.

4. Know what cues trigger your greed. Watching the financial news and constantly checking stock prices may keep you too excited for your financial good. Only you can be honest with yourself to determine this area. Better to not make a trade if you hear that inner voice, even if you could have doubled your money.

5. Carefully think through any investment decision and always reconsider before it is irrevocable. Reflexive decision making is disastrous in the market.

In the next chapter, studies also showed that being happy can make you richer. Contentment stems more from doing things that make you happy than from mere possessions. Do what makes you happy. Do what you love, do what makes you feel the most alive and fulfilled.

The book deals next with forecasting. Many people believe that if they do their homework they will be able to predict stock performance. They're often wrong for three reasons.

First, the market price for any stock represents the collective decision of millions of analysts, investors and pundits. The market is, for the most part and in the long term, correct in its aggregate judgment. The market price has already taken everyone's predictions into account. Since "everyone" can often be wrong because of wrong thinking like we have discussed in this book, it is not a safe course.

Second, transaction costs and taxes can erode your profits, so even if your hunch about a stock is correct, playing it can be expensive. People often forget how far a stock has to rise to compensate for these costs.

Third, market prices move randomly. Perceived patterns are in the eye of the beholder—not in the market. How many times have we seen this in the last couple of years? And remember, it can go both ways. As I am writing this we have a market that is totally insane and going up for months. Why? How can it be? We are trillions of dollars in debt, our dollar is crushed, and the numbers are totally doom and gloom. But the "perception" is what is driving it, and that perception comes from people who watch the news and listen to the media tell their lies each day.

These points are totally true, yet people find it difficult to invest accordingly. The human mind, automatically and uncontrollably looks for patterns. We are built that way. People seem to have an innate aversion to randomness.

But the good news is you can cope with what is and what ought to be, if you remember these things: Control what you can control and do not attempt to control what you cannot control. You can control your goals, risks, preparations, transaction costs, taxes and conduct. Think about each of those areas individually and work to perfect each one. Lately as we all know, it has been impossible to control the government. They are doing many illegal things in the market. I can't control that.

Establish an investment discipline, such as investing a monthly amount, to prevent you from making whimsical decisions based on hunches or predictions. Each person must figure out their own disciplines. With our different personalities, upbringing, culture and all the other influences that affected us growing up, each person must do an honest evaluation and implement those disciplines that you do not naturally possess.

Demand clear evidence to support any decision, and practice investment strategies on paper for at least a year before betting any money on them. The one nice thing about an investment is it is not a person. So you can be as hard as you want with it. Get tough. If you can't find evidence to support your investment decisions, then simply don't do it.

Always determine your investment's reasonable, expected long-term results. Don't be persuaded by random good fortune. We did a book on this not long ago by Warren Buffett. You may want to review these principles in his book because it is such an important point.

Know the difference between correlation and causality. Just because two events coincide does not mean that one caused the other.
Take a break now and then. If your brain focuses too intently on any set of data, you’re likely to create patterns within it. Look away and then look back. For me personally, this has been a point I have struggled with. People with more aggressive personalities tend to function with an attitude of always solving the problem. We have to find the answers. We logically sort data and come to conclusions. But in investing this could spell disaster. So take a break, focus on something different, and come back with a refreshed attitude.

Research indicates that people place a greater degree of confidence in their capabilities than the facts justify and they may exaggerate success and minimize failure. Moreover, people are most likely to trust the familiar. In experiments researchers exposed people to nonsense words or unfamiliar symbols and found that they tended to have favorable feelings about those they heard or saw most frequently. So ask yourself, does this affect me when making investment decisions?

Human beings are also susceptible to the illusion of control. Studies of brain activity indicate that the appearance of control makes people more comfortable than a lack of control—even when the apparent control is meaningless. Again, ask yourself, is this a trap I can fall into when making investment decisions?

People also tend to be more comfortable with a random choice that they make themselves than with a random choice somebody else makes for them. Although no difference exists in terms of results or mathematical probabilities between two random choices, people prefer their own. Since this is natural to us, question if the other person may know more or have more experience than you. This will help you make a better choice.

Familiarity, overconfidence and an illusion of control can mislead investors. To avoid these pitfalls, admit what you don’t know. Follow the example of Warren Buffett and ignore investment proposals that you do not understand. Discount your expectations of financial gain and magnify your estimates of probable losses to minimize the risk of overconfident decisions.

Don’t buy a stock just because you know a company’s products. Be realistic and don’t kid yourself. Consider how well others investors have done. Do your reflective, analytical homework. Think like a four-year-old: Four-year-olds always have a habit of asking the question, “Why?” Then they ask why again and again.

One of the best tools to really keep reality in perspective is to keep a diary of your investments. Track whether your performance correlates with your emotions. The diary will help you learn from your mistakes. I still do this today even after 27 years of investing. It has been among the most helpful things I’ve ever done. I keep a written journal of every stock, option, mutual fund, or Forex trade I make. In that journal I put the date, purchase price, and where the Dow, NASDAQ, and S&P 500 were trading on that day. Then I write a two sentence note to myself of what I perceive the market conditions are at that point and what I think they will look like in the future over the next three months. Then on a scale of 1 to 10 I rate my confidence, knowledge, and feelings of how well I expect the stock to perform and the reasons why. It is always interesting to go back a few months later, or when I sell the stock, and see how close I was in my predictions. This has helped me hone in on my strengths and weaknesses, and learn more about myself and how my brain works in any other thing I do in the market.

By applying these principles, neuroeconomics can help you bring your confidence into sync with reality, making you a better investor than you may ever have imagined. On the other hand, people who base their investment decisions on what they suppose their “risk tolerance” is, may go down for three reasons.

First, many people have no idea how much risk they can really tolerate, and when price volatility hits, they may bail out of an investment at the worst possible time.

Second, risk tolerance is not constant. It can vary from time to time and from activity to activity. Animal experiments suggest that risk aversion is deeply rooted. From insects through primates, a bias exists toward small but sure rewards instead of large but uncertain ones. I know we did not evolve from animals, but in this part of our brain we function nearly the same as animals.

Third, the way a probable risk is described can lead people to perceive it as more or less risky: For example, if I would say that you have an 80% chance of succeeding, then your brain processes that one way. On the other hand, if I say you have a 20% chance of failing, your brain will process that data a totally different way. Therefore your attitude about a proposition that stresses success will differ from attitudes about a proposal that emphasizes a 20% chance of failure. It is good to get in the habit of asking the question both ways with a critical attitude. This forces your brain to deal with more reality and truth than emotion.

What other people think, feel or say also affects your risk perceptions. Information is contagious, and so are feelings about rewards and risks. Moreover, regret is a risk. Someone who earns a 10% return on capital may be satisfied until he meets someone who has earned 30%. Suddenly your brain switches to think what could have been, and will try to project that into your future. It is actually a form of greed that can cause you to make some very serious financial mistakes. So be very careful about what other people think or say. Many people live their whole lives letting others control them, rather than being in control.

The book then suggests a number of things to manage your attitude to risk. Let's do a brief summary of each.

• Take time to consider investment decisions. Do not act reflexively based on your perception of risk because framing and other factors can change it.

• Be your own adviser. Before making a definite financial decision, ask yourself if you would recommend that course of action to someone else who relied on your advice and trusted you. If you would not recommend it, why would you do it?

• Study enough financial history so that you will be prepared for ups and downs. Learn that the market is a living, breathing creature, that it takes in air, and lets it out when it gets too inflated, and take advantage of the fluctuation where most people are using emotions rather than their heads.

• Wait before acting when the crowd is running in fear from falling prices; remember, falling prices make investments less risky.

• Draft an "investment policy statement" setting out your goals and the rules that you will follow to reach them. Stick with this as if your life depended on it. Especially when you set rules about when to get in or get out. If you have a little over 3% sell stop, never break the rule.

• Seek a devil's advocate to argue against your assumptions and try to disprove your own investment case. My wife is a "little devil" in this way. She is not always right, but I've learned to listen to her. She often sees things I am not aware of, or that I am aware of, but don't see the big picture. Surrounding yourself with critical people who have your best interest in mind is a great asset.

• Understand yourself and how you react to risk in different circumstances. This only comes with experience and time.

The final section deals with panic. Research on fear has shown that it is highly contagious. There is a section of your brain that is specifically associated with fear. It becomes active in response to certain facial expressions, body postures or words that express fright or threat. Fear is the second strongest emotion in the human body and when you attach it to financial situations, it can become one of the most destructive emotions in the world. You really have to watch this area.

For example, the very thought of losing money causes fear. Uncertainty itself can be frightening and makes people behave irrationally. To deal with investing fears, talk yourself out of panic. When your fear centers are firing in response to something you've seen or heard, try to describe what's happening in your own words. They have learned in neuroscience that when you use words to describe your fears, it changes this part of your brain. Rephrase the fear and reframe it. Take a deep breath. Break away from the crowd.

This has been a difficult book to summarize this month. I would really encourage you to read the entire book because there are so many interesting points that would apply to different people under different circumstances. We all have unique personalities, experience, and ways we look at life and information. Every one of you reading this has a brain that processes information in a different way. So get to know your brain!

The end.