10 cognitive biases that can lead to investment mistakes

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To be a successful investor over the long term, we believe it is critical to understand, and hopefully overcome, common human cognitive or psychological biases that often lead to poor decisions and investment mistakes. Cognitive biases are 'hard wired' and we are all liable to take shortcuts, oversimplify complex decisions and be overconfident in our decision-making process. Understanding our cognitive biases can lead to better decision making, which is fundamental, in our view, to lowering risk and improving investment returns over time. I have outlined below key cognitive biases that can lead to poor investment decisions:

1. Confirmation bias

Confirmation bias is the natural human tendency to seek or emphasise information that confirms an existing conclusion or hypothesis. In our view, confirmation bias is a major reason for investment mistakes as investors are often overconfident because they keep getting data that appears to confirm the decisions they have made. This overconfidence can result in a false sense that nothing is likely to go wrong, which increases the risk of being blindsided when something does go wrong.

To minimise the risk of confirmation bias, we attempt to challenge the status quo and seek information that causes us to question our investment thesis. In fact, we are always seeking to 'invert' the investment case to analyse why we might be wrong. We continually revisit our investment case and challenge our assumptions. It is much more important to ask yourself why you are wrong than why you are right. Charlie Munger, the Vice Chairman of Berkshire Hathaway and Warren Buffett's business partner, said: "Rapid destruction of your ideas when the time is right is one of the most valuable qualities you can acquire. You must force yourself to consider arguments on the other side."

In our view, the strength of many of history's most accomplished scientists and mathematicians has been their ability to overcome their confirmation bias and to see all sides of a problem. Carl Jacobi, the famous 19th century mathematician, said: "Invert, always invert."

2. Information bias

Information bias is the tendency to evaluate information even when it is useless in understanding a problem or issue. The key in investing is to see the 'wood from the trees' and to carefully evaluate information that is relevant to making a more informed investment decision and to discard (and hopefully ignore) irrelevant information. Investors are bombarded with useless information every day, from financial commentators, newspapers and stockbrokers, and it is difficult to filter through it to focus on information that is relevant. In our view, daily share price or market movements usually contain no information that is relevant to an investor who is concerned about the medium-term prospects for an investment, yet there are entire news shows and financial columns dedicated to evaluating movements in share prices on a moment-by-moment basis. In many instances, investors will make investment decisions to buy or sell an investment on the basis of short-term movements in the share price. This can cause investors to sell wonderful investments due to the fact that the share price has fallen and to buy into bad investments on the basis that the share price has risen.

In general, investors would make superior investment decisions if they ignored daily share-price movements and focused on the medium-term prospects for the underlying investment and looked at the price in comparison to those prospects. By ignoring daily commentary regarding share prices, investors would overcome a dangerous source of information bias in the investment decision-making process.

3. Loss aversion/endowment effect

Loss aversion is peoples' tendency to strongly prefer avoiding losses than obtaining gains. Closely related to loss aversion is the endowment effect, which occurs when people place a higher value on a good that they own than on an identical good that they do not own. The loss aversion/endowment effect can lead to very poor and irrational investment decisions whereby investors refuse to sell loss-making investments in the hope of making their money back.

The loss-aversion tendency breaks one of the cardinal rules of economics; the measurement of opportunity cost. To be a successful investor over time you must be able to properly measure opportunity cost and not be anchored to past investment decisions due to the inbuilt human tendency to avoid losses. Investors who become anchored due to loss aversion will pass on mouth-watering investment opportunities to retain an existing loss-making investment in the hope of making their money back.

In our view, all past decisions are sunk costs and a decision to retain or sell an existing investment must be measured against its opportunity cost. To increase our focus on measuring opportunity cost, we run the Magellan Global Fund like a 'football team' where we have the ability to put about 25 players onto the paddock at any one time. This forces us to focus on the opportunity cost of retaining an existing investment versus making a new investment in the portfolio. We believe many investors would make superior investment decisions if they constrained the number of investments in their portfolios as they would be forced to measure opportunity cost and make choices between investments. Buffett often gives the illustration that investors would achieve superior investment results over the long term if they had an imaginary 'punch card' with space for only 20 holes and every time they made an investment during their lifetime they had to punch the card. In Buffett's view, this would force investors to think very carefully about the investment, including the risks, which would lead to more informed investment decisions.

4. Incentive-caused bias

Incentive-caused bias is the power that rewards and incentives can have on human behaviour, often leading to folly. The sub-prime housing crisis in the US is a classic case study in incentive-caused bias. Notwithstanding that financiers knew that they were lending money to borrowers with appalling credit histories, and in many cases people with no incomes or jobs and limited assets ('NINJA' loans), an entire industry, with intelligent people, was built on lending to such people.

How did this happen on such a massive scale? We believe the answer can be found in the effect of incentives.

At virtually every level of the value chain, there were incentives in place to encourage people to participate. The developers had strong incentive to construct new houses. The mortgage brokers had strong incentive to find people to take out mortgages. The investment banks had a big incentive to pay mortgage brokers to originate loans so that they could package and securitise these loans to sell to investors. The ratings agencies had strong incentive to give AAA ratings to mortgage securities to generate fees, and banks had a big incentive to buy these AAA-rated mortgage securities as they required little capital and produced enormous, leveraged profits.

Buffett said: "Nothing sedates rationality like large doses of effortless money. After a heady experience of that kind, normally sensible people drift into behaviour akin to that of Cinderella at the ball. They know that overstaying the festivities – that is, continuing to speculate in companies that have gigantic valuations relative to the cash they are likely to generate in the future – will eventually bring on pumpkins and mice. But they nevertheless hate to miss a single minute of what is one helluva party. Therefore, the giddy participants all plan to leave just seconds before midnight. There's a problem, though: They are dancing in a room in which the clocks have no hands."

One of the key factors we focus on in making investment decisions is our evaluation of agency risk. We evaluate the incentives and rewards systems in place to assess whether they are likely to encourage management to make rational long-term decisions. We prefer companies that have incentive schemes that focus management on the downside as well as the upside and encourage management to return excess cash to shareholders. For instance, executive compensation that is overly skewed towards share-option schemes can encourage behaviour that is contrary to the long-term interests of shareholders, such as retention of earnings above those that can be usefully reinvested into the business.

5. Oversimplification tendency

In seeking to understand complex matters humans tend to want clear and simple explanations. Unfortunately, some matters are inherently complex or uncertain and do not lend themselves to simple explanations. In fact, some matters are so uncertain that it is not possible to see the future with any clarity. In our view, many investment mistakes are made when people oversimplify uncertain or complex matters.

Albert Einstein said: "Make things as simple as possible, but no more simple."

A key to successful investing is to stay within your 'circle of competence'. A key part of our 'circle of competence' is to concentrate our investments in areas that exhibit a high degree of predictability and to be wary of areas that are highly complex and/or highly uncertain. We believe that forecasting the volume growth for Colgate-Palmolive, Coca-Cola or Procter & Gamble is relatively foreseeable over the next 10 years and is well within our circle of competence. Investing in financials is far more complex and we are disciplined to try to ensure we do not overly simplify the inherent complexity of a major financial institution. If we cannot understand the complexity of a financial institution, we simply will not invest, no matter how compelling the 'simplified' investment case may appear. Notwithstanding that our investment team has over 50 years of combined experience in analysing financial institutions, there are many institutions that we believe are simply too difficult to assess.

In our view, the majority of the investment mistakes we have made can in large part be attributed to our cognitive biases, where we have fallen susceptible to confirmation bias, have oversimplified a complex problem or strayed outside our circle of competence. Unfortunately, these cognitive biases are 'hard wired' and we will make mistakes in the future. Our aim is to have systems and processes in place that minimise the number of mistakes we will inevitably make due to our cognitive biases.

6. Hindsight bias

Hindsight bias is a tendency to see beneficial past events as predictable and bad events as not predictable. In recent years, we have read many explanations for poor investment performance that blame the unpredictability and volatility of markets. In our view, some of the explanations are as credible as a school child complaining to the teacher that 'the dog ate my homework'. While we have made mistakes, we will not blame our mistakes on so-called unpredictable events. In fact, not a single mistake we have made over the past five years could be attributed to an unpredictable event or market volatility but rather to errors of judgment. We have always sought to candidly outline our investment mistakes in our Investor Letters and will continue to do so.

In our view, hindsight bias is a dangerous state of mind as it clouds your objectivity in assessing past investment decisions and inhibits your ability to learn from past mistakes. To reduce hindsight bias, we spend significant time upfront setting out in writing the investment case for each stock, including our estimated return. This makes it more difficult to 're-write' our investment history with the benefit of hindsight. We do this for individual stock investments and macroeconomic calls.

7. Bandwagon effect (or groupthink)

The bandwagon effect, or groupthink, describes gaining comfort in something because many other people do (or believe) the same. Buffett tells a story about the oil prospector who dies and is in a large crowd of other oil prospectors who are all waiting at the gates of heaven. All of a sudden, the crowd disperses. Saint Peter asks the oil prospector why the crowd dispersed. The oil prospector said it was simple: "I shouted, 'Oil discovered in hell.'" Saint Peter asks the oil prospector why he would like to be let into heaven. After thinking for a while the oil prospector says, "I think I will go and join my colleagues as there may be some truth in that rumour after all."

In our view, to be a successful investor, you must be able to analyse and think independently. Speculative bubbles are typically the result of groupthink and herd mentality. We find no comfort in the fact that other people are doing certain things or whether people agree with us. At the end of the day, we will be right or wrong because our analysis and judgement is either right or wrong.

In avoiding the pitfalls of the bandwagon effect, I am reminded of the Robert Frost poem, *The Road Not Taken*, where he writes:

"Two roads diverged in a wood and I,
I took the one less travelled by,
And that has made all the difference."

While we don't seek to be contrarian, we have no hesitation in taking 'the road less travelled' if that is what our analysis concludes.

8. Restraint bias

Restraint bias is the tendency to overestimate one's ability to show restraint in the face of temptation. This is most often associated with eating disorders. Most people are wired to be 'greedy' and want more of a good thing or a 'sure winner'. For many people, money is the ultimate temptation. The issue for many investors is how to properly size an investment when they believe they have identified a 'sure winner'. In our opinion, many investors have come unstuck by overindulging in their 'best investment ideas'. In our opinion, 'sure thing' investments are exceptionally rare and many investments are sensitive to changes in assumptions, particularly macroeconomic assumptions.

To overcome our natural tendency to buy more and more of our best ideas, we hardwire into our process restraints or risk controls that place maximum limitations on stocks and combinations of stocks that we consider to carry aggregation risk. The benefit of risk controls to mitigate the human tendency to greed is well captured by the quote from Oscar Wilde: "I can resist everything except temptation."

9. Neglect of probability

Humans tend to ignore or over- or underestimate probability in decision making. Most people are inclined to oversimplify and assume a single point estimate when making investment decisions. The reality is that the outcome an investor has in mind is their best or most probable estimate. Around this outcome is a distribution of possible outcomes, known as the distribution curve. The shape of the distribution curve of possible valuation outcomes can vary dramatically depending on the nature and competitive strength of an individual business. Businesses that are more mature, less subject to economic cycles and have particularly strong competitive positions (examples would include Coca-Cola and Nestlé) tend to have a tighter distribution of valuation outcomes than businesses that are less mature or more subject to economic cycles or are more subject to competitive forces. Examples in our portfolio would include Wells Fargo, eBay and Alphabet (the owner of Google). In our portfolio-construction process, we distinguish between different businesses to account for the different risks or probabilities of outcomes.

Another error investors make is to overestimate or misprice the risk of very low probability events. That does not mean that 'black swan' events cannot happen but overcompensating for very low probability events can be costly for investors. We seek to mitigate the risk of 'black swan' events by including in the portfolio a meaningful proportion of businesses (purchased at appropriate prices) where we believe the distribution curve of valuation outcomes is particularly tight. We term these businesses as high-quality long-cycle businesses. We believe the risk of a permanent capital loss from a 'black swan' event in this part of the portfolio is low. If we have real insight that the probability of a 'black swan' event is materially increasing and the pricing is attractive enough to reduce this risk, we will have no hesitation in making a material change to the portfolio, particularly our holdings of shorter-cycle businesses. The issue for investors is assessing when the probability of such an event is materially increasing. It is usually not correlated with the amount of press or market coverage on a particular event. Buffett once said: "The worst mistake you can make in stocks is to buy or sell stocks based on current headlines."

10. Anchoring bias

Anchoring bias is the tendency to rely too heavily on, or anchor to, a past reference or one piece of information when making a decision. There have been many academic studies undertaken on the power of anchoring on decision making. Studies typically get people to focus on a totally random number, like their year of birth or age, before being asked to assign a value to something. The studies show that people are influenced in their answer, or anchored, to the random number that they have focused on prior to being asked the question.

From an investment perspective, one obvious anchor is the recent share price. Many people base their investment decisions on the current share price relative to its trading history. In fact, there is an investment school of thought (called technical analysis, an amusing term in itself) that bases investing on charting share prices. Unfortunately, where a share price has been in the past presents no information as to whether a stock is cheap or expensive. We base our investment decisions on whether the share price is trading at a discount to our assessment of intrinsic value and we have no regard as to where the share price has been in the past. We also have little regard to the prevailing share price in deciding to invest the time to research a new investment opportunity. We know share prices change and we want to have a range of well-researched investment opportunities so that we can act on an informed basis when prices move below our assessment of intrinsic value.