Overconfidence Trap

A frequently overlooked aspect of investment and speculation is how we make decisions and the way in which our decision making can carry with it important unconscious cognitive biases.

What is a cognitive bias? A cognitive bias is a systematic deviation from rational judgement.

Typically, this area of decision making is the final step in the development of an investor or speculator from being a beginner to an effective practitioner. Earlier stages are analysis, money/risk management and the development of an investment or speculation plan.

First, though some definitions:

Investment is where we purchase a part ownership in a business, from which will flow an income stream and hopefully growth in capital invested over time. Investing can be anything from passive to active. Investment can be through the stock market or directly.

Speculation is where we trade in financial securities, which may be derivatives, in order to make a capital gain. This gain may be from being either long or short. Speculation is always active and can be anything from day-trading to short term trading. There is no precise definition in terms of timeframe.

Investment and speculation involve quite different mindsets:

An ***investor*** has the mindset of an owner of a business and is more concerned with the business they own than with the price of its shares.

A ***speculator*** has the mindset of a trader and often knows or cares little about the business; only about the price of its shares.

These different mindsets derive from the differing source of profits from investing or speculating.

For convenience, I will refer only to investors in this article. However, the cognitive biases that drive overconfidence apply equally to investors and speculators.

Classical Economics

The starting point for a discussion of how investors make investment decisions is classical economics, where the overarching assumption is that we make totally rational decisions. Classical economics further assumes that we have clear investment goals and possess all available information. From this it follows that we make decisions that are a rational and optimal balance of risk and reward.

Behavioural Finance

However, it was inevitable that some academics would begin to test this assumption that we are relentlessly rational by conducting experiments and trying to find out how we actually make decisions. This field of study has grown exponentially and has already yielded Nobel prizes in

Economics. These academics and their field of study is described using several names, such as behavioural finance and behavioural economics. The basic idea is to take a new look at economics by removing the unrealistic assumptions and starting from the way we actually make decisions in the real world.

In short, what behavioural finance has found is that when we are operating in an environment of uncertainty, we tend to make decisions that are often quite different to those that might be indicated by classical economics. This is because we use shortcuts called heuristics. They tend to result in decisions that are frequently quite at odds with the rules of probability.

The Way Forward

In short, we are now aware, or should be, that we all make decisions irrationally most of the time. These decisions can be seen as errors of judgement and are largely unconscious unless we have studied the research and learned to see this behaviour for what it is. I am writing this article in an effort to raise readers' awareness and to propose some strategies to minimise common biases in decision making.

The way forward is to learn about cognitive and emotional biases in decisions made by ourselves and others. Biases are often easier to see in others than in ourselves. In that respect they can be a way station on the journey to better self-awareness. Also, it should not be overlooked that decisions made by others affect us. We need also to deal with that issue.

Once we start to see these biases in action, we can start to modify the way we make decisions to try to minimise their impact and the impact upon us by decisions made by others that are also based on their biases. The goals are to create a better investment plan, make better decisions and through that to better achieve our financial goals.

Some more definitions:

I used the terms cognitive and emotional in the paragraph before last. These have very specific definitions in behavioural finance and the general study of human thinking processes called psychology. These two terms mean:

Cognitive refers to biases which arise from faulty reasoning. This involves conscious thought. Cognitive biases can be avoided or at least mitigated through better awareness and consciously practising their avoidance through strategies I will give at the end of this article.

Emotional refers to biases that arise from impulse or intuition and are not conscious thought or calculation. Emotional biases are much more difficult to rectify. However, it is possible to mitigate them through better knowledge, hopefully leading to greater awareness of them, and through adopting the strategies that I will suggest at the end of this article.

Summarising the discussion of what behavioural finance is we see that it studies actual investor behaviour with the aim of identifying cognitive and emotional biases which influence our decision making. From this we can devise strategies aimed at improving our investment decision making.

The Trap

Good decision making features two key elements:

The first element is fact finding. Most investment decisions will be more soundly based if we have uncovered all of the easily available facts. The internet has made this a great deal easier than it was twenty of thirty years ago. We can discover information more quickly and search many more possible sources. Increasingly we should be able to avoid the sick feeling in the pit of our stomach when an investment fails because there was something that was readily available, but that we did not take the time to find out. However, there are also two downsides to this flood of information on the internet. One downside is that doing the research takes time, something which none of us has in abundance. The other downside is that some information on the internet is of dubious quality and we must be ever more able to assess the value of what we are reading there.

The second element is having an appropriate level of confidence, or being well grounded in the limits of our knowledge. We cannot operate as effective investors unless we have enough confidence in what we know and what we decide to do in order to actually pull the trigger on transactions. Many beginners fall into two camps when it comes to confidence. The first camp lacks confidence and tends to freeze and procrastinate, rather than getting on with investing. In the second camp are the ones in the overconfidence trap. Overconfidence is a term coined by behavioural finance researchers to describe a particularly dangerous bias in our investing decision making. This is when we tend to be far more confident about our decisions than we should be.

Overconfidence afflicts most beginners other than those in the first camp who lack confidence. In particular, it affects beginners more than those with experience, because with experience comes greater humility about how much we think we know. Overconfidence may also tend to affect speculators more than investors, but I am not aware of definitive research on this point. Finally, it has been demonstrated in research that males suffer more from overconfidence than females. So the boys have a bigger problem than the girls do. However, before the girls start to laud it over the boys, it should be stressed that both males and females are overconfident. It is only that women tend to be less overconfident than men, but both have the problem of overconfidence.

Overconfidence is when we think we know more than we actually do. Its most pernicious manifestation is when we are absolutely certain that we know something, but it is actually untrue. This means that we act on wrong information from which we have drawn wrong conclusions. Yet we act with great confidence because we are ignorant of our mistake. This can be very destructive of our account when it plays out in the context of investing.

Overconfidence, like most biases and errors in thinking, is easier to see in other people than in ourselves. This suggests that the place to start in being aware of the overconfidence bias is to look for it in others. Then, every time we become conscious of it in others, we should ask ourselves if we have ever been subject to the same bias in the same or a similar situation. This is difficult and will be a challenge to our self-image. After that the difficult part is to try to see it in our behaviour in real time.

That said, overconfidence lurks more consistently in some situations than in others. One of the striking observations made by researchers is that most of us will tend to exhibit overconfidence when we try to estimate something which is difficult to estimate. In this context, to estimate can also mean to forecast something. This is because of a number of very human traits that centre on looking for simple drivers in complex situations. Where there is a direct and simple cause and effect relationship between two things, which is well documented, our certainty may be well justified. However, in investing we are dealing with an extremely complex system in which there are many parameters that are difficult to quantify. Moreover the relationships between these factors vary dynamically over time and place. Indeed estimating and forecasting are so difficult and fraught with the likelihood of error that my own personal philosophy is to avoid forecasting altogether and to adopt a different approach to investing decisions. However, that is outside the scope of this article and is a subject for another time and place.

Dangerous Times

Not only does overconfidence not apply to everyone, it will apply pervasively in some situations and yet be unlikely to be generally manifested in others. There are four very dangerous times for overconfidence:

1. Overconfidence tends to be strongly exhibited in most of us when accurate judgements of any kind are difficult to make. This has been largely discussed above. An important awareness method is to score decision situations on a scale of one to ten with one being when accurate judgements are probably quite easy and ten is when accurate judgements are almost impossible. The closer the score is to ten, the more cautious we should be about our high risk of being wrong, even when we have made our best effort to be correct.

2. Overconfidence tends to be everywhere around us and we ourselves are at greatest risk of overconfidence when general confidence in the community is very high. As investors, this will be in the last stages of a bull market or bubble. Everything around us screams that we have never had it so good and only a fool is not in there minting money. A good clue here is when it is difficult to find people with a contrary view or when those who do hold a contrary view are vilified and ignored. It does not mean that dissenters are always right. In fact, they will often be wrong. However, the times when everyone seems to accept a view of the markets is when we should be questioning our own confidence, seeking out contrary views and assessing them with the aim of avoiding being caught up in the crowd when the crowd is deluded by the careless belief that this time it is different. In this respect, my own motto is to beware anyone, including myself, who is 95 to 100% certain of anything. This is when I am most on guard as an investor and looking to take a contrary view or to position my investment portfolio in a very defensive manner, heavily in cash.

3. Overconfidence tends to be far more prevalent when we find ourselves dealing with issues that are outside of our area of expertise. Just ask how many times we have heard someone spouting clear and definite ideas about the simplicity of an obvious solution for a problem in an area that they know absolutely nothing about. This issue has been studied in students who are sitting for an examination. On exit from the exam, the students were asked to estimate their mark. At one end of the scale, the students who knew the least about the subject and therefore achieved the lowest marks had vastly overestimated their own actual mark. This over estimation declined as students knew more and achieved higher

marks. At the opposite end of the scale, where there were students who knew the most about the subject and achieved the highest marks, their estimate of their own mark was quite close to the actual mark or in fact lower than the mark they actually achieved.

4. What this previous point means is that as we become expert about an issue, our overconfidence tends to decrease. However, overconfidence is a tricky bias. Experts in a subject are also prone to hubris. If an expert finds they are right more often than others are, or are right more consistently than other people, they can become very arrogant about their ability. This means that they become overconfident even when most times they would not be in their area of expertise. Overlaid on this can be the pernicious influence of public adoration of experts who develop a good track record in something.

Why We Become Overconfident

In order to understand ourselves better with regard to overconfidence, it can be helpful to review the reasons why we ordinary human beings unconsciously develop the overconfidence bias.

Illusion of Superiority

We have already touched on this one above. Most of us tend naturally and unconsciously to have some level of illusion about our own superiority. It is easy to see around us once we know to look for it. There are two main ways in which this illusion of superiority plays out:

1. We all tend to be unrealistically positive about our own abilities. We saw this above when we looked at the exam results experiments. Only the very small group of real experts may largely avoid this one. Notice that I said real experts. That means those who have that status from objective testing, not their own judgement that may be just the illusion in action.

2. We all tend to be unrealistic about our futures. This means that we all tend to think that we will do well, while others will struggle, even though there is no evidence to support such a belief. This can be seen in a simple experiment that has been repeated many times by academics, but can be replicated in any group that does not know why we are asking the question. Ask the group something simple such as to write down how they rate themselves as drivers of a motor car relative to the rest of the group. Ask them to rate themselves as above average or below average. Every time this is done, more than half will rate themselves as above average. However, objectively half of the group must be below average and only half can be above average. There is a lot more research along these lines with different questions and situations, always with the same result.

The best way to mitigate this illusion of superiority in ourselves is to bring to mind that half of any group cannot be above average and that applies to us, so we should be on guard whenever we think we may be above average.

Illusion of Control

This one is all around us every day in our society. Every time there is some misfortune, people look to attach blame to someone. It is very rare these days for very many of us to instinctively judge that it might have been just an accident. Most of us have some level of naïve belief that we can control or should be able to control random events. This illusion of control comes from two strong tendencies in all of us:

1. We like to think that we are in full control of our destiny. In other words that we can totally plan and shape the kind of life we would like, or at least more so than most other people can. One moment's conscious thought should dispel that belief because we are all at the mercy of fate in all its manifestations, like disease, war, recessions and so on, which must be outside our control. The clue here is conscious thought. The problem with these biases is that they are at the level of unconscious thought and reinforced by the same general beliefs, also unconscious, all around us.

2. As we have already discussed, we all tend to have a strong belief in our own decision making ability relative to others. This strongly reinforces our belief that we can control our own destiny and therefore builds our illusion of control.

One useful way to mitigate our illusion of control is to remind ourselves that accidents, or what the insurance industry terms *Acts of God*, do happen and far more often than we care to admit, because we are busy looking for a scapegoat. Try to develop the habit to assume things even good things happen by chance unless there is incontrovertible evidence that we were able to make it happen.

Limited Imagination

This is a big one in investment. Every investment we make will be driven by an assessment of a situation and what we think are the possible scenarios that may play out going forward. Ideally, we would score those scenarios for estimated probability and likely result if they came to pass. However, as investors very few of us ever get anywhere near first base in this exercise. We all tend to imagine that our investment is a sure thing. This is partly hope at work in our minds, but far deeper down, at the unconscious level, we all tend to think that we have imagined all of the possible scenarios. The problem is that we are all very poor at this task. If you doubt me, just ask how many times we have all been genuinely surprised by the actual turn of events that was way outside of the possibilities that we had imagined. It happens to me all the time and I have been working at overcoming it for years now. This is a tough one to overcome. Reading history and taking the time to ruminate on situations helps, as does seeking the imagination of other people who are not involved in our situation.

Confirmation Bias

In this article I am looking at the overconfidence bias. However, it is supported by other biases that have been well researched by behavioural finance academics. One of them is confirmation bias. This is how it works in investment: For some reason a stock comes to our attention. We might read something positive about it. We take a quick look at it and it seems fine. We may need to buy another stock with recent savings, so we decide to buy the stock, but realise that we should do some thorough research on it first. At this point we may quite unconsciously employ one or both of two methods of researching the stock:

1. We could ask many of our friends what they think. Now some will profess ignorance, but some will be positive about the stock, with reasons and others will be negative. With the positive ones, we engage in a happy discussion, because it reinforces our belief in the stock.

However, with the negative ones, we either disregard them quickly or enter into an argument with them about the negative points they suggest as a way to try to reinforce and thus confirm our existing belief. We look for confirmation and disregard uncomfortable contrary views.

2. Then again, we may not seek simply the opinions of others to confirm our decision. We may seek out facts and expert opinion from stock analysts. Again, the common reaction is to quite unconsciously seek out and spend a lot of time on confirming evidence, but disregarding any disconfirming or discomforting evidence or facts that we come across. However, it can even get worse: we may even interpret conflicting evidence such that it supports our preconceived decision.

This bias is very common in all of us and, at the end of the article I will suggest some strategies that are aimed directly at it. For the moment, whenever we find ourselves with a strong view about something, stop and remember that it is only one choice and we will not find better choices unless we look for them. Likewise, if it all looks rosy with no negatives, we have not yet started to look properly or ask the right questions. One thing that good investors say consistently is that the most difficult decisions often turn out to have been the best ones. There are two sides to every situation in investing.

Selective Memory

This one is quite dangerous. We all have a selective memory about investments we have made. This is how it works: We feel good about the investments that lead to big or at least good returns. These are the ones we unconsciously want to remember. Moreover, they are the ones we talk about to others and is called exchanging war stories. This repeated telling of the tales of our best investments also reinforces our memory of them.

On the other hand, there will be many investments that we make that result in losses or very unsatisfactory returns. This is an inevitable part of investing, no matter how good we are at the craft. These are the ones that we unconsciously do not want to remember or talk about to others, partly to protect our ego. It is painful to think about them or to talk about them, so we don’t and that leads to us generally forgetting about them.

Now we have a selective memory, which is full of our successes, but has pushed our failures out of mind. Our memory is now totally unbalanced. The result is that we have a quite unrealistic idea of how good an investor we are. This reinforces the illusion of superiority and the illusion of control in particular.

Fortunately, there is a really good strategy to combat this bias and I will explain it at the end of the article.

Certainty versus Accuracy

Academic researchers have had a field day with this one, finding it in spades in trained experts and ordinary people alike. The research has typically asked a question, but more importantly, the subjects were asked how certain they were about their answer. Since the questions were such that there was a definite factual answer, it was easy to compare certainly and accuracy of the answers. The scores usually fall out like this:

If 100% certain, they tend to be accurate only 80% of the time.

If 90% certain, they tend to be accurate only 75% of the time.

If 80% certain, they tend to be accurate only 65% of the time and so on…

The results for this kind of research experiment are very consistent in showing that our certainty always exceeds our accuracy, no matter what the test. This demonstrates our general tendency to overconfidence in almost any sphere.

Illusion of Knowledge

Academic researchers have gone to town with this one, again finding it to be very prevalent in both trained experts and ordinary people. One famous research experiment started with trained experts and graduate students in a field of study. They were given some information and asked to make a judgement based on it. At the same time they were asked how confident they were of their judgement being correct. Then in four stages, they were each time given more information and questioned again each time about their judgement and their confidence in it. The results were that their confidence in the accuracy of their judgement rose steadily for each stage from just over 30% confident to just over 50% confident. However, the accuracy of their judgements fluctuated in a narrow band between 23% and 29%, and actually fell in the second stage.

This experiment and many others like it show that there is a common illusion among both experts and ordinary people that more information will increase the accuracy of judgements. In these experiments, given more information the subjects increased in confidence, but accuracy hit a ceiling and stayed there or thereabouts.

The illusion also involves the idea that more information is better. However, more information might well be poor information. In any case, even if the additional information is as good, or better than the initial information, it may not assist us to make better judgements. What does matter is not how much information we have, but being able to know which are the important factors driving a situation. In other words, not the information itself, but what we do with it is what matters.

In short, more information usually increases our overconfidence, but not out judgement or decision making skills.

Availability Bias

I remember that when I first learned about this one it was a kind of eureka moment. It made so much sense to me in terms of something I felt was there, but had not been able to formulate a clear idea about.

Availability bias occurs because three kinds of situation make a very large impact on us and unconsciously cause us to make totally distorted judgements compared to the principles of probability. The three kinds of situations that come to mind out of all proportion are:

- Events that happened to us personally or to people very close to us.
- Events that were very shocking or in some way graphic and repeatedly reported in the media.
- Events that happened recently rather than some time ago.

Hence the term availability bias: These events are most available in our memory.

The problems with availability bias that lead to poor judgements are threefold:

1. Our sample size is too small, so we are seeing only part of a picture and cannot apply the principle of probability, which requires us to know all of the possible kinds of occurrence and how likely each one is.

2. We therefore lack a sense of proportion.

3. Moreover, most of us in this situation will not stop to consider what the real probabilities might be.

Again, I will shortly suggest strategies to try to combat this bias.

Four Detrimental Investment Behaviours

Now we get to the important investment behaviours that result from overconfidence:

First, we tend to overestimate our ability to select good investments. This is primarily because we are unconsciously blind to negative or disconfirming evidence.

Second, we tend to overestimate our own knowledge and ability generally as investors. This leads to excessive activity and poor returns. It is evident in both investing and speculation, but may be somewhat more evident in speculation, where there are many more transactions anyway in a given period compared to investment.

Third, most of us do not track and have good knowledge of our own previous investment performance. This typically means that we will tend to underestimate our downside risk, which will lead inevitably to more and larger losses.

Fourth, most investors like us tend to substantially overrate our ability and the knowledge that we have when selecting stocks to buy. The common result is that we take bigger risks than we should, especially in being under-diversified in our portfolio.

Five General Implications for Investors

Overconfident investors, and we all tend to be overconfident to some extent, will tend to fail in these five ways:

1. We will not be well prepared for what is ahead of us in our lives.
2. We fail to understand and utilise key principles of probability in our decisions.
3. We will not put enough time and work into planning and what we do will be of low quality and incomplete.
4. We save too little and usually start far too late in our lives. Remember that capital with which to invest comes from saving part of our income, unless we win a lottery or inherit from our family (even that tends to be too late in our lives).

5. Most of us will therefore inevitably fail to meet our financial goals, even if we have got as far as understanding what they should be and setting out to make them happen.

Now we come to the pay dirt in this article. I have taken you through what overconfidence is, what causes it, and what problems it causes. Clearly, we need to work on overcoming it if we are to become effective investors.

Strategies to Employ to Avoid the Effects of Overconfidence

Since learning about and understanding overconfidence, I have been trying my hardest to carry out these four strategies that are aimed at avoiding its effects:

Strategy 1: Beware Small Samples

We should be very watchful and aware of small samples in investing. There is an abundance of beliefs in both fundamental analysis and especially in technical analysis that have not been proven in a scientific and disciplined way that is widely accepted in other disciplines. We cannot test everything we might use, but the simple discipline that will help avoid the small sample problem is to do our best to answer these questions:

1. How many times has this pattern or idea worked in the past?
2. How many times has it failed to work?

We should try consciously to never accept anything as being true without knowing the full statistically proven facts about when it is true and when has it been false and how many times. No matter how roughly we answer this question, just being aware of the need to ask it and not knowing the answer will tend to make us far more circumspect when using the pattern or idea. That will reduce our level of overconfidence at least in part.

Strategy 2: See Both Sides

This is one of my favourites and one of the most powerful strategies. On any question, we should be determined to see both sides before we form a view ourselves and act upon it. This is especially powerful when we find ourselves absolutely certain about buying a stock. We should never buy a stock unless we understand the reasons why someone would sell it to us. There are two powerful ways to carry out this strategy:

First, set out the pros and cons. This is an ancient technique that everyone should have learned at school and never forgotten. Take a sheet of paper and draw a line down the centre. Head one side “pros” and the other side “cons”, then write down all the reasons we know on both sides. If we have a large number of reasons in favour of our decision and few or none at all against it, we have a problem of overconfidence. Our view is unbalanced and we are in grave danger of making a poor decision. We should force ourselves to think about the reasons why someone would be on the other side of our proposed transaction. If we cannot figure out the reasons, we need to find someone who can assist us to see the other side. Only when the sheet is complete on both sides can we weigh it all up and make a far better decision most of the time. It may well often be what we started out to do in most cases, but it just might catch the ones where we are overconfident through lack of research and thinking and will save us from big losses.

Second, seek a devil's advocate. This term comes from the way popes in the catholic faith go about deciding upon whether to make someone a saint. In short, a case in favour is presented. The pope will then appoint someone, known as the devil's advocate to investigate and present the case against the proposed canonisation. As investors we can use a similar method when we find we can only see the arguments in favour of an investment. We seek out someone who is able or willing to present the case against our proposed transaction. Once we have the case for and against, we can weigh the arguments up and come to a better decision.

The key idea here is to be a sceptic and to practise the methods known by the general term contrary thinking, where we take any generally accepted idea and try to disprove it. This will be most effective when everyone around us seems to believe that this time things will be different. By definition, that is a situation totally at odds from the facts. Avoiding the pull of the crowd at these times can be very profitable for an investor.

Strategy 3: Awareness that Quality is Better than Quantity

The idea here is to focus on what is important and don't waste too much time and energy on the things that do not make a real difference in a decision. The way to apply this idea is to read and learn widely about both fundamental and technical analysis. Then identify which are the critical ratios in fundamental analysis for our type of investing. At the same time, identify which are the key charting ideas or mathematical indicators for our investing method. Then focus on them primarily.

The next step is not to just focus on one or a few stocks that we may happen to come across. That is another aspect of the small sample problem discussed earlier. Instead, apply our key fundamental and technical criteria to lots of opportunities and select the best of them to analyse in depth.

The idea that I keep in mind here is never to fall in love with a stock that I know very well. In fact, I have trained myself to be more cautious with the familiar than with the unfamiliar in the universe of stocks available to me for investment.

Strategy 4: Consider Every Critical Aspect

This is a sub-set of the previous strategy in that the focus is on what is important or critical to the situation or stock. Once we have decided to look at a stock in depth, a useful technique is the well-known SWOT analysis. It may be employed in analysing and assessing a specific investment. It is a method to make us look at every important influence on the business. There is abundant information about this method, so I will confine these remarks to the key headings in the SWOT acronym:

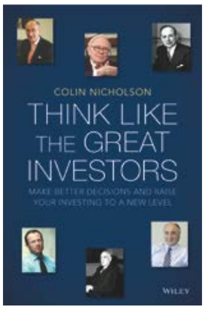
For a stock, we should try to consider what are its:

- Strengths
- Weaknesses
- Opportunities
- Threats

Once we have them, we will likely make a better informed decision about investing in that business than just taking a stab in the dark on limited information and depth of thought. If it is difficult to come up with a clear view with any of the SWOT headings, the ideas above under the see both sides strategy can be employed.

Key Thought to Take Away

The most dangerous of all overconfidence aspects is what we think we know for sure, but is not correct. We should be trying to train ourselves to be on high alert when we feel absolutely sure of anything about investing. More value comes from constant questioning of beliefs than on their blind acceptance.



More of my articles on decision making are available in my book *Think Like the Great Investors* available for purchase from the website here on the *Think Like to Great Investors* page on the *Buy Books* menu.

This article is a version of the presentation made to the ATAA National Conference in Brisbane in October 2010 and repeated at Dr Alexander Elder's Pacific Traders' Camp in Macau, China in November 2010 under the heading Mind over matter.

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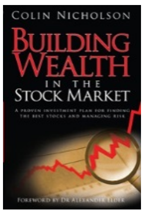

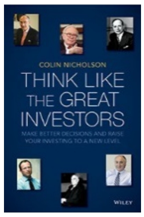

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