

State of Play

Behavioural bias



8 June 2023

Given how much of our lives have changed in the past 20 years, driven largely by technology and innovation, can these changes inform alternative ways of managing money? Human emotions can lead to strong behavioural biases which can sometimes cloud investment choices. What are the most common biases and how can systematic investing help to avoid emotional decision making? Our Senior Investment Specialist, Simon Durling, shares his thoughts in this week's State of Play.

Key highlights from this week's State of Play

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- Systematic investing
- Risk parity
- Market update

Behavioural bias

Investing has a complex history which one could argue has been heavily influenced by natural human emotions and biases. Many of these biases have been studied over the years leading to an array of academic research and literature. History shows there have been times when either greed has led to asset bubbles or when panic has led to devastating crashes.¹ With a large influx of new investors over the last couple of years, what part could these new participants play in the way the various investment markets behave? Much of our human biases are based on fear and greed, but many biases have subtle, sometimes unnoticeable traits which can be just as powerful in influencing both decision-making and investment outcomes. So, what are some of these biases and how do professional investment managers try to avoid them?

Biases tend to be split into two main types: 1) Cognitive bias, which is the way our brains process and interpret information using mental short-cuts or a rule of thumb to help us reach quick decisions; and 2) Emotional bias, which is driven by pure impulse and intuition.² When it comes to investing, behavioural biases can lead to poor decision-making and investment outcomes. The following biases are just a small sample from a long list of different types and do not seek to summarise a complex subject. My aim is to provide some examples to give context when exploring how investment firms attempt to overcome, avoid, or even take advantage of them.



1. Loss aversion

Cognitive mathematical psychologist Amos Tversky and his associate, Daniel Kahneman, first identified and studied loss aversion as part of prospect theory, publishing a landmark paper in 1979 which demonstrated losses stir our emotions twice as powerfully when compared to the same gains.³ In simple terms people fear losing £100 twice as much than the prospect of gaining £100.



2. Sunk cost fallacy

Closely connected to loss aversion is the endowment effect, also known as sunk cost fallacy, when individuals place a higher value on an asset they own when compared to a similar or identical asset they do not own.⁴ This can lead to investors holding on to assets which have fallen in value in the hope or expectation that eventually they may recover the money they have lost, even if analysis shows that selling and investing in an alternative may have better prospects of regaining the loss over time.



3. Confirmation bias

Typically, this is where individuals look for information to prove something that they already believe to be true. They tend to focus on the things that matter to them and dismiss the things that don't by 'sticking their head in the sand', which is often referred to as the 'Ostrich effect'.⁵ This can lead to overconfident investment decisions and failing to identify when circumstances change or ignoring information that would disprove their original investment idea.⁶



4. Herd mentality (bias)

This bias can be seen in stock market bubbles and crashes when people rationalise a course of action as the right one because 'everybody else' is doing it.⁷ Human beings have evolved over thousands of years where their survival was dramatically improved if they stayed in a group.⁸ Often people take comfort from doing the same things others are doing or have the 'fear of missing out'. This bias plays a huge role in investment markets especially given how much new money has entered markets by 'first time investors' since the COVID-19 pandemic.

During the lockdowns many people saved money from not having to commute to work, dine out or travel abroad and chose to invest this money instead. Given the extraordinary numbers of new market participants the UK regulator, the Financial Conduct Authority, conducted research in March this year into what they describe as 'self-directed investors' expressing concerns about the type of investments they choose and how they access them. They said, 'the research found that for many investors, emotions and feelings such as enjoying the thrill of investing, and social factors like the status that comes from a sense of ownership in the companies they invest in, were key reasons behind their decisions to invest.'⁹



5. Hindsight bias

This is where past events which have positive outcomes are viewed as predictable but poor outcomes are somehow unpredictable. It can reduce or remove objectivity in assessing previous decisions and stop an investor from learning from their mistakes.¹⁰ This is not to say that investors will never make mistakes, because it is entirely possible to make a decision that is well thought out and perfectly rationale but still results in a loss. Investing for the right reasons but with a poor outcome is just part of investing. Mistakes will always happen, however what is important is that investors are able to identify these mistakes and learn from them.

How do investment firms approach behavioural bias?

The CFA Institute offer a good description of this on their website: 'Behavioural biases potentially affect the behaviours and decisions of financial market participants. By understanding these biases, financial market participants may be able to moderate or adapt to them and, as a result, improve investment outcomes in different economic conditions. Behavioural biases may be categorized as either cognitive errors or emotional biases. The type of bias influences whether its impact may be moderated or adapted to.'

Systematic investing

Systematic investing, also referred to as 'quants based' investing, is very different to the fundamental approach. Quantitative investment strategies, which are guided by sets of rules, aim to exploit investor bias and market inefficiencies to diversify portfolios, improve returns and control risk.¹¹ The principle is based on using quantitative mathematical models to measure data and characteristics of investment markets.

Systematic processes use these mathematical models to measure large amounts of live data enabling investment experts to tilt their portfolios to capture changes in asset prices, volatility, and correlation (or other factors and data points). By investing following a pre-determined set of rules, the process enables a better understanding of previous investment outcomes and results and anticipates the type of market regime in which a model is likely to perform, whether this be to add excess returns or lag the wider market.

So, what are some examples of systematic or quants-based investing?

Smart beta

Smart Beta challenges the assumption that markets are efficient and that all investors are rational. If an investor wanted to invest in a stock market, they could invest in a low-cost tracker or passive fund that aims to replicate the index of the market (hence why they are known as index trackers). However, almost all indices are price and market weighted. So, in simple terms, this means the proportion an index is made up by one company listed on it will depend on the market capitalisation, which is the prevailing price of its stock multiplied by the number of its shares outstanding.

If the share price of this company grows significantly compared to other shares in the index, the value increases and the proportion or weight of this share grows with it. By its broadest definition, any portfolio construction process that doesn't rely on price to select and weight stocks is considered a Smart Beta strategy.¹² Smart beta strategies aim to take advantage of how indices are constructed by measuring factors other than price and weighting to tilt and allocate portfolios to access potential market gains. By weighting a portfolio and investing in companies which are expected to outperform based on a specific set of metrics, Smart Beta breaks the link between price and

portfolio weight in an effort to deliver excess returns. The most commonly cited forms of Smart Beta are fundamental weighting, volatility weighting, dividend weighting, and equal weighting.¹³

Momentum investing

The principle of momentum investing is that the rise or fall of an asset price will continue long after the initial movement began. The assumption with this method is that market participants are slow to react to new information about either earnings or about the asset class, and tend to overreact both on the upside and the downside. In some ways this methodology is looking to exploit the 'herd mentality' covered earlier.¹⁴ Often the fear of missing out draws new investors into buying company shares because they have noticed the share price has been rising over a period of time and so they choose to buy-in to capture some of this price gain. Investors may do the complete opposite if they hold an investment which has been falling continuously for some time, fearing the price will fall further, therefore triggering them to sell this investment thus pushing the price even lower.

Momentum models are designed to measure how much a price has moved (either higher or lower) over different time periods to assess the 'momentum' in this price. Normally this is combined with assessing the consistency of this price movement and whether there are any data anomalies which may skew the data to a false reading. Momentum strategies buck the accepted 'buy low, sell high' theory, as the philosophy assumes price movements typically continue long after the trigger for the rise or fall began, and that 'herd mentality' helps push the trend further and for longer. It normally comes with a highly volatile investment journey if used in isolation, but at times can deliver excess returns by tapping into market bias and volatility.

Mean reversion

Mean reversion works under the assumption that an asset's price will tend to converge to the average price over time. When the current market price is less than the average past price, the stock is considered attractive for purchase, with the expectation that the price will rise. When the current market price is above the average past price, the market price is expected to fall. Mean reversion is negatively correlated (this means it behaves in the opposite direction) to a momentum strategy and measures data over different time horizons. In practice, it means that momentum investing is sometimes combined with mean reversion to try to deliver better risk adjusted investment returns.

Risk parity

Risk parity focuses on risk allocation. The main aim is to find weights of assets that ensure an equal level of risk, normally measured by volatility. To allocate the correct risk parity weight to an asset, the process aims to understand its risk characteristics. Risk parity does not use equal weights. Instead, it uses the inverse risk approach. This approach gives a lower weight

to riskier assets, like shares, and a more significant weight to less risky assets, like bonds. This method ensures that the risk contribution of each asset is the same.

As investment market value changes and volatility fluctuates, the model measures the change in this volatility and correlation between the asset classes, in order to tilt the allocation, always looking to balance the risk contribution. In many cases risk parity approaches access methods of borrowing or short selling (borrowing an asset and immediately selling on the assumption the price will fall) in order to achieve the best risk-reward trade-off.¹⁵ If risk parity is combined with other systematic approaches, sometimes this can negate the necessity to use borrowing strategies. Risk parity can often reduce the overall portfolio risk and normally offers additional returns when stock markets are falling significantly. It does, however, tend to lag in bull markets when stock prices are rising sharply. Risk parity strategies normally use derivatives for portfolio efficiency and risk management, so these positions require active management.

A less discussed, yet important, advantage of a risk parity approach is its potential to achieve significant incremental returns through rebalancing. The amount of excess return generated through rebalancing is a function of asset class volatility and diversification. All else being equal, the more volatile and diversified the assets within a portfolio, the more value that can be created through rebalancing. With risk parity assets are selected based on their diversification benefits and levered up or down to achieve a target volatility. This construction process creates an ideal environment for systematically harvesting gains in the portfolio through rebalancing.¹⁶

What approach works best?

The simple answer to this question is it depends... As with all investment strategies either traditional, more well-known philosophies, or with more complex rules-based investing, the economic climate, market conditions and/or the design of an investment process will define an investor outcome over time. Importantly, technology and academia over the last few decades have explored the mathematics and biases that exist in investment markets and how they influence investor behaviour. Systematic investing offers alternative ways to manage investments accessing market emotions and biases, and sometimes taking advantage of them or seeking to avoid them. It also offers transparency about how the investment process has performed, enabling asset managers to anticipate how the model being used may behave in the future and under which market environment they expect to generate excess returns or lag in certain circumstances.

With a large increase in new investors, the benefits of exploring more diverse ways of managing investments are numerous. In our complex world, embracing varied ways to meet investor's needs, will in my view become more important and grow in popularity. One thing I am certain about, if the









research carried out by the FCA is anything to go by, for some, investing can be a minefield. A decision to invest based on 'the fear of missing out' and building a suitable financial plan based on your circumstances, needs and long-term goals, whilst no doubt interconnected, are in my view a very different investor experience. As always, if you feel uncertain about your choices or perhaps are concerned about a decision you may have taken in the past, then I would suggest reaching out to a professional financial adviser to seek guidance and advice where appropriate.

Market update

Last week, investors breathed a huge sigh of relief as the US Senate, backed by bipartisan support, passed legislation to allow the US debt ceiling to increase, extending the time for the next review until 2025 and avoiding a similar political row during next year's presidential election campaign. The bill needed 60 members of the 100-member Senate to pass the bill onto President Joe Biden's desk for signing. Eventually, after much political posturing, 17 Republicans joined 46 Democrats to scrape through 63 to 36, with the President signing off the following day.¹⁷ Markets rallied strongly, especially the technology sector. The bullish mood didn't last long as investors began their current daily ritual – which is to worry about inflation. The latest US jobs numbers sprang a surprise as the non-farm payroll numbers, a strong indicator to the health of the US economy, showed 339,000 new posts created in May versus the 180,000 forecast. Whilst the unemployment rate rose slightly more than expected from 3.4% to 3.7% and wage growth edged down, it remains elevated at 4.3%.¹⁸ The Federal Reserve is due to meet for two days next week to decide on whether to pause interest rates. The market consensus up until last week had heavily bet on them pressing the pause button. However, following the latest set of data, this has shifted. Crucially, the start of their meeting coincides with the release of the latest US inflation data, with markets looking to see if the all-important core inflation has started to ease. Employment and wage growth are key drivers of inflation, particularly in services, and officials have been watching for a slowdown in these measures to show the medicine of higher rates has finally started to work.





















Performance

Index	Value	Change	%	12 Month High	12 Month Low
					
FTSE 100	7,607	-19.92	-0.26%	8,014	6,826
FTSE 250	19,149	355.22	1.89%	20,615	16,611
					
Dow Jones Industry	33,763	669.42	2.02%	34,590	28,726
S&P 500	4,282	76.92	1.83%	4,305	3,577
NASDAQ	14,547	248.23	1.74%	14,547	10,679
					
Hang Seng	18,950	203.02	1.08%	22,689	14,687
					
Nikkei 225	31,524	607.91	1.97%	31,524	25,717
					
CAC 40	7,271	-48.49	-0.66%	7,577	5,677
					
DAX	16,051	67.26	0.42%	16,275	11,976
					
FTSE Eurofirst 300 Eurozone	2,428	-23.90	-0.97%	2,547	1,950
					
S&P TSX Composite Index	20,025	104.32	0.52%	21,032	18,206
Commodity markets*					
Gold	\$1,965.02	24.62	1.27%	\$2,047.01	\$1,628.00
Crude Oil	\$76.32	-0.23	-0.30%	\$129.65	\$70.96

Source: Eikon, prices displayed in the local currency.

*Gold Bullion London Bullion Market \$ Per Metric Tonne Ounce Delay & Brent Forties and Oseberg Dated Free on Board Northsea Crude used for commodity performance.
Source Data from the 30 May 2023 to 2 June 2023.

10-year bond yields

Country		Variation	12 Month High	12-Month Low
 UK	4.16%		4.50%	1.81%
 US	3.69%		4.23%	2.61%
 Japan	0.42%		0.51%	0.17%
 Euro	2.31%		2.75%	0.76%
 Germany	2.31%		2.75%	0.76%
 France	2.87%		3.24%	1.35%
 Italy	3.99%		4.82%	2.95%
 Spain	3.32%		3.79%	1.86%
 China	2.72%		2.99%	2.62%

-0.50% 0.00%

Currencies

Currency	Conversion	Price	Change	12 Month High	12 Month Low
Dollar	GBP > USD	\$1.24	0.01%	\$1.26	\$1.07
Euro	GBP > EUR	€ 1.16	0.01%	€ 1.20	€ 1.11
Yen	GBP > YEN	¥174.20	0.59%	¥174.20	¥154.73

Source: Eikon.

Source Data from the 30 May 2023 to 2 June 2023.

Learn more!

Investing can feel complex and overwhelming, but our educational insights can help you cut through the noise. Learn more about the Principles of Investing [here](#).

Note: Data as at 8 June 2023.

- ¹ Marketwatch, 3 February 2018
- ² Pimco, 28 June 2022
- ³ Kahneman, D. & Tversky, A. Prospect Theory, 1977
- ⁴ Magellan Group Insights, July 2019
- ⁵ Capital.com, 28 June 2022
- ⁶ Capital.com, 28 June 2022
- ⁷ Capital.com, 28 June 2022
- ⁸ Management Study Guide, 28 June 2022
- ⁹ Financial Conduct Authority, 23 March 2021
- ¹⁰ Magellan Group Insights, July 2019
- ¹¹ Amundi, 30 September 2021
- ¹² Research Affiliates, 28 June 2021
- ¹³ Amundi, 30 September 2021
- ¹⁴ CFA Insights, August 1997
- ¹⁵ Investopedia, 22 January 2022
- ¹⁶ AQR Capital Management, 1 October 2010
- ¹⁷ The Times, 2 June 2023
- ¹⁸ Investing.com., 5 June 2023

Important Information

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