

2. What is Behavioural Finance?

Behavioural finance is commonly defined as the application of psychology to understand human behaviour in finance or investing. The term appears in many books, magazines and other media, but many people still lack a clear understanding of the concepts behind behavioural finance or what it really means. One cause of this confusion is that there are a number of disciplines resembling behavioural finance, such as behavioural science, investor psychology, cognitive psychology, behavioural economics, experimental economics and cognitive science, to list just a few. The discussion of behavioural finance can be split into two subtopics:

- Behavioural Finance Micro, which looks at the irrational behaviour of individual investors, and
- Behavioural Finance Macro, which looks at irregularities in the overall market.

2.1 Micro versus macro

Behavioural Finance Micro (BFMI) examines the behavioural biases (that is, irrational behaviours) of *individual investors*. It compares irrational investors to rational investors envisioned in classical economic theory, known as *Homo economicus* or “rational economic human being”. **Behavioural Finance Macro (BFMA)**, on the other hand, describes “anomalies” or irregularities in the *overall market* that contradict the efficient market hypothesis.

Many students of the securities markets are taught that markets are efficient. However, researchers have uncovered abnormal market behaviours, such as the January Effect and others, that demonstrate that human behaviour influences securities prices and therefore markets. For wealth advisors, the primary focus of behavioural finance is micro, or BFMI, the study of individual investor behaviour. Specifically, the wealth advisor seeks to identify relevant psychological biases her clients might have and to investigate their influence on asset allocation decisions, so that she can manage the effects of those biases on the investment process and thereby help her clients meet their financial goals.

Example: A client who is subject to loss aversion bias will likely hold on to losing investments too long. If the advisor can identify this bias in her client, she can help the client overcome this damaging behaviour and, therefore, make better asset allocation decisions.

To gain an understanding of BFMI, the wealth advisor must consider the central question of irrational versus rational behaviour: do individual investors behave rationally, or do cognitive (relating to conscious intellectual activity such as thinking, reasoning and remembering) and emotional errors influence their financial decisions? Much of economic and financial theory is based on the notion that individuals act rationally and consider all available information in the financial decision-making process. However, many researchers have documented evidence of irrational behaviour and repeated errors in financial judgment. The most fundamental topic in behavioural finance research is the classic debate of *Homo economicus* versus the behaviourally biased individual.

Rational economic individual versus behaviourally biased individual

First established in neo-classical economics, *Homo economicus* (or rational economic human being) is a model of human economic behaviour that hypothesizes that three principles rule economic decisions made by individuals:

- Perfect rationality
- Perfect self-interest
- Perfect information

Homo economicus is a model that academics and practitioners believe in with varying degrees of stringency. A few believe in a “strong” form, which holds that irrational behaviour does not exist. Others have adopted a “semi-strong” form; this version sees an abnormally high occurrence of rational economic traits. Other economists support a “weak form” of *Homo economicus*, in which the irrational traits exist but are not strong.

All of these versions share the core assumption that humans are “rational economic maximizers,” who are self-interested and make rational economic decisions. Economists like to use this as a principle for two primary reasons. First, *Homo economicus* makes economic analysis relatively simple. Second, it allows economists to quantify their research findings, which makes their work easier to teach and disseminate. If humans are perfectly rational, possess perfect information and display perfect self-interest, then perhaps their behaviour can be quantified.

Most criticisms of *Homo economicus* proceed by challenging the bases for these three underlying assumptions.

Criticisms of Perfect Rationality

When humans are rational, they have the ability to make logical and self-interested judgments. However, many would agree that rationality is not the sole driver of human behaviour. In fact, many psychologists believe that the human intellect is actually subservient to human emotion. They contend that human behaviour is less the product of logic than of subjective impulses such as fear, love, hate, pleasure and pain, and that humans use their intellect only to achieve or avoid emotional outcomes. Thus, from this perspective, perfect rationality is only a theoretical construct, not a practical occurrence.

Criticisms of Perfect Self-interest

Many studies have demonstrated that human beings are not perfectly self-interested. If they were, neither philanthropy nor charity would exist. Most religions promote selflessness, sacrifice and kindness and have done so for centuries. Perfect self-interest would preclude people from performing unselfish acts of kindness such as volunteering or helping the underprivileged. Perfect self-interest would also prohibit self-destructive behaviour such as suicide, alcoholism and substance abuse. Again, the argument that people are perfectly self-interested is a losing one.

Criticisms of Perfect Information

Some people may possess perfect or near-perfect information on certain subjects. For example, a doctor or dentist should be well versed in the inner workings of the human body and mouth. It is not possible, however, for every person to enjoy perfect knowledge of every subject in existence. For example, suppose a shopper named Mrs. Rebeiro needs a loaf of bread. If Mrs. Rebeiro had perfect information, she would know the price of every loaf of bread for sale in every shop in town. But perfect information does not exist in the real world. Many other good examples can be found in the world of investing, in which there is nearly an infinite amount to know and learn, and even the most capable investors don't master all disciplines. One would be hard-pressed to believe that anyone possesses perfect information, especially in the investing realm.

In conclusion, people are neither perfectly rational nor perfectly irrational, but possess diverse combinations of rational and irrational characteristics, and can benefit from an advisor's help with respect to their shortcomings. With this basis for acknowledging the existence of behavioural finance, it is time to explore another core concept in behavioural finance: the standard finance versus behavioural finance debate.

2.2 Standard Finance versus Behavioural Finance

Meir Statman is one of the great contributors to the field of behavioural finance. For Statman, the foundations of standard finance were built by several important intellectual leaders of finance: the Miller and Modigliani arbitrage pricing principles, the Markowitz portfolio principles, Sharpe's capital asset pricing model, and the Black, Scholes, and Merton option pricing theory. These intellectual leaders of finance provide mathematical explanations for complex finance questions that, when posed in the real world, are complicated by imprecise and challenging conditions. The standard finance approach relies on a set of assumptions that often oversimplify reality. For example, embedded within standard finance is the concept already introduced of *Homo economicus*, or the rational economic human being; nice in theory but impractical in reality.

Standard finance is characterized by rules about how investors *should* behave rather than by principles describing how they actually behave. Behavioural finance, on the other hand, identifies with and learns from human behaviour demonstrated by individual investors in financial markets. Behavioural finance, like standard finance, contains underlying assumptions, but standard finance grounds its assumptions in *idealized* financial behaviour; behavioural finance, in *observed* financial behaviour.

Efficient markets versus irrational markets

During the 1970s, the standard finance theory of market efficiency became an accepted model of market behaviour by many academics and professionals. The **efficient market hypothesis** was developed from the doctoral dissertation of Professor Eugene Fama of the University of Chicago. Fama believed and demonstrated that, in a securities market populated by many well-informed investors, investments will be accurately priced and reflect all available information.¹ There are three forms of the efficient market hypothesis:

- *Weak form*: all past market prices and data are fully reflected in current securities prices; that is, technical analysis is of little or no value.
- *Semi-strong form*: all publicly available information is fully reflected in current securities prices; that is, fundamental analysis is of no value.
- *Strong form*: all information (including insider information) is fully reflected in current securities prices.

Many market efficiency studies point to evidence that supports the efficient market hypothesis. Researchers have documented numerous, persistent anomalies, however, that contradict the efficient market hypothesis. There are three main types of market anomalies that advisors should know about:

- Fundamental anomalies
- Technical anomalies
- Calendar anomalies

A **fundamental anomaly** is an irregularity in a security's current price when compared to a fundamental assessment of its intrinsic value. There is a large body of evidence documenting, for example, that investors consistently overestimate the prospects of growth companies and underestimate the value of out-of-favour companies. In a totally efficient market, this would not happen. Professors Ken French and Eugene Fama performed a study of low price-to-book-value ratios that covered the period between 1963 and 1990.² The study considered all equities listed on NYSE, AMEX, and/or NASDAQ in the United States. The stocks were divided into 10 groups by book/market and were re-ranked annually.

The highest book/market stocks outperformed the lowest book/market stocks 21.4% to 8%, with each decile (representing one-tenth of the sample or population) performing more poorly than the previously ranked, higher-ratio decile. They also ranked the deciles by *beta* (the measure of an investment's volatility relative to the market as a whole) and found that the value stocks posed lower risk and the growth stocks had the highest risk. This result encouraged many investors to buy value stocks. The methodology contained in the analysis is widely used today and is based on inefficient market conditions.

¹ Fama, Eugene F. "Random Walks in Stock-Market Prices." Selected Papers; No. 16; Chicago Graduate School of Business: University of Chicago, 1965.

² Fama, Eugene, and French, Ken. "The Cross-Section of Expected Stock Returns." *Journal of Finance* (1992). Winner of the Smith-Breeden prize for the best paper in the *Journal of Finance* in 1992.

A **technical anomaly** is rooted in a form of market examination called technical analysis. **Technical analysis** attempts to forecast securities prices by studying past prices. Sometimes, technical analysis reveals inconsistencies with respect to the efficient market hypothesis. Patterns emerge that are called technical anomalies. In general, the majority of research-focused technical analysis trading methods are based on the principles of the weak-form of the efficient market hypothesis. Many believe that prices adjust rapidly in response to new stock market information and that technical analysis techniques are not likely to provide any advantage to investors. However, proponents continue to argue the validity of certain technical strategies and use them frequently.

A **calendar anomaly** is an irregular securities pattern that emerges during certain times of the year, such as the January Effect mentioned earlier. The **January Effect** shows that stocks in general, and small stocks in particular, move abnormally higher during the month of January. Haugen and Jorion, two researchers in this area, have observed that the January Effect is, perhaps, the best-known worldwide example of anomalous behaviour in security markets.

The January Effect is particularly illuminating because it hasn't disappeared despite being well known for many years; arbitrage theory (taking advantage of a state of imbalance between two or more markets) tells us that anomalies should disappear as traders attempt to exploit them. From a practical standpoint, the January Effect is attributed to stocks rebounding following year-end tax-loss selling. Individual stocks depressed near year-end are more likely to be sold for tax reasons.