

BEHAVIOURAL FINANCE AND SYSTEMATIC ALPHA

MARCH 2026

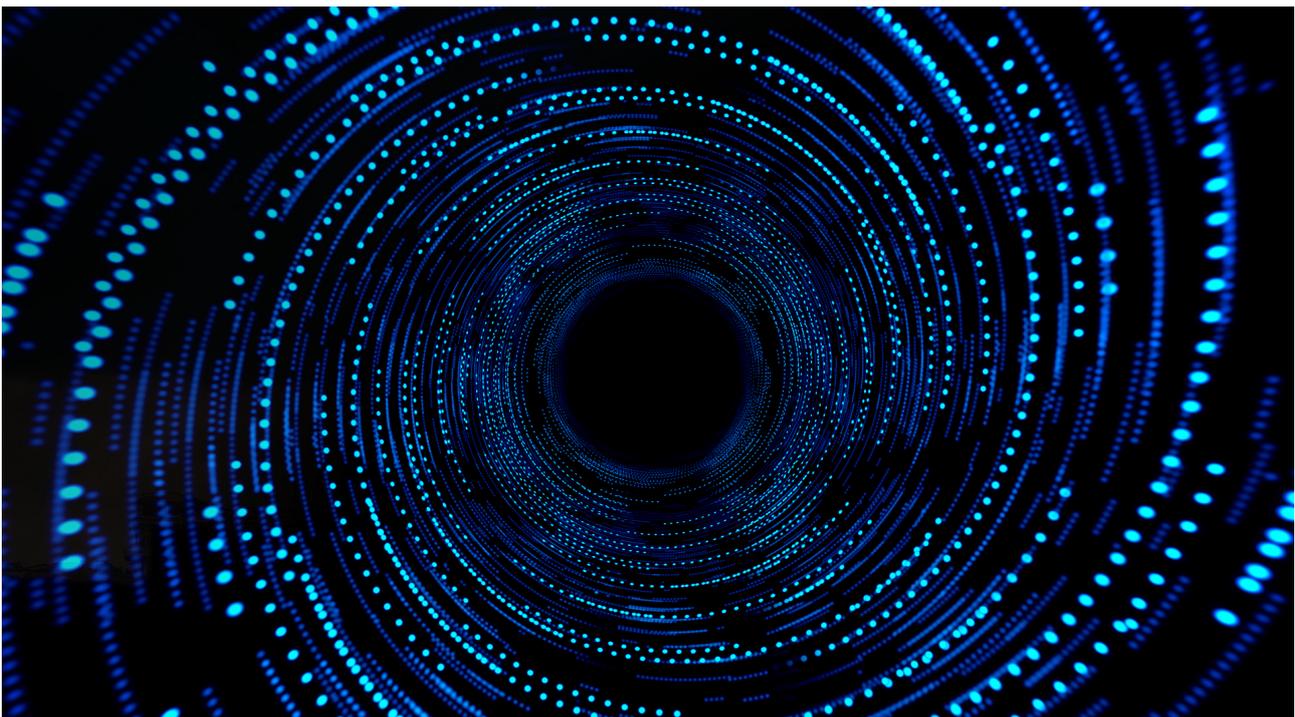
Author:



Amadeo Alentorn
Lead Investment Manager
Jupiter Systematic Equities

Amadeo Alentorn, head of systematic equities, argues that the science of psychological biases forms a compelling basis for systematic investing.

Real-world markets are not, as classical finance theory once held, equilibrium states clearing prices between completely rational investors armed with all available information. On the contrary, markets are prone to long-tail risks, characteristically exhibit bubbles and crashes, and are driven by sentiment and investors' psychological biases. Many market participants and observers anecdotally point to behavioural drivers; their experience has been increasingly supported by academic asset-pricing research over the past four decades.



Since the 1980s, the academic study of asset pricing has documented persistent return premia inconsistent with the simplest version of the Efficient Market Hypothesis (EMH). The EMH holds that market prices always fully reflect all available information (Fama, 1970). Among the return premia for which there is robust evidence are momentum (Jegadeesh & Titman, 1993), long-term reversal (De Bondt & Thaler, 1985), and value (Fama & French, 1992; Lakonishok, Shleifer, & Vishny, 1994).

By momentum is meant the continued outperformance of winners. This is often defined in the academic literature as the positive autocorrelation of returns at the 3–12 month horizon. By long-term reversal is meant the reversal of momentum at longer time horizons; more formally, negative autocorrelation at multi-year horizons. By value is meant the outperformance of cheaper stocks; often defined as the cross-sectional outperformance of stocks with a high book-to-price ratio (although other valuation metrics may be used). The above definitions of generic factors are often found in the literature.

The purpose of this paper is to provide a general introduction to some of these ideas. In our own practice, extending over more than two decades of research, we have developed proprietary strategies that go beyond the simple, generic factor definitions mentioned above. While our systematic process seeks to exploit many of the behavioural biases that have been extensively reported in the academic literature, it is designed to do so in a way that seeks higher risk-adjusted returns and to neutralise some of the risks associated with generic risk premia factors. We have been able to do that by collaborating with leading academics, dissecting which part of each behavioural anomaly can offer a source of alpha, and which are cyclical risk factors that we need to control or neutralise.

Economists had known about the importance of psychology in markets long before the Behavioural Finance movement studied it explicitly. For example, back in 1936, John Maynard Keynes wrote: “... day-to-day fluctuations in the profits of existing investments, which are obviously of an ephemeral and non-significant character, tend to have an altogether excessive, and even an absurd, influence on the market.” (Keynes, 1936).

Among the behavioural biases that have been formally studied by academics in recent decades are anchoring, overconfidence, extrapolation bias, herding, prospect theory (which shows that people value gains and losses differently), slow information diffusion, underreaction, overreaction, and delayed overreaction.



GLOSSARY OF BEHAVIOURAL BIASES

**ANCHORING**

A cognitive bias in which individuals rely disproportionately on an initial reference point, such as a past price, forecast, or valuation, when forming judgments under uncertainty. Subsequent adjustments away from that anchor tend to be insufficient, even when new information warrants larger revisions. In markets, anchoring can slow price adjustment or create resistance around salient levels.

**DELAYED OVERREACTION**

A behavioural pattern in which investors initially respond too cautiously to new information (underreaction) but subsequently revise beliefs excessively as confirming signals accumulate. The combination of early conservatism and later extrapolation can produce extended trends followed by sharp reversals.

**EXTRAPOLATION BIAS**

The tendency to project recent trends or outcomes too far into the future. Investors overweight recent performance when forming expectations about long-term prospects, leading to overly optimistic projections for recent winners and overly pessimistic expectations for recent losers.

**HERDING**

A behavioural phenomenon in which individuals align their decisions with those of others, either because they infer information from observed actions (informational herding) or because deviating from the group carries reputational or career risk (reputational herding). Herding can amplify price trends and increase crowding in popular trades.

**OVERCONFIDENCE**

A well-documented bias in which individuals overestimate the accuracy of their knowledge, forecasts, or abilities. In financial markets, overconfidence can manifest as excessive trading, narrow confidence intervals around forecasts, and insufficient recognition of uncertainty or alternative outcomes.

**OVERREACTION**

A behavioural response in which investors revise prices too far in response to news, pushing valuations beyond levels justified by fundamentals. Overreaction is often associated with strong emotional responses, narrative reinforcement, and high trading intensity, and may be followed by long-horizon reversal.

**PROSPECT THEORY**

A descriptive theory of decision-making under risk (Kahneman & Tversky, 1979) showing that individuals evaluate gains and losses relative to a reference point rather than in absolute terms. It predicts loss aversion (losses loom larger than gains), diminishing sensitivity, and asymmetric risk-taking: risk aversion in gains and risk-seeking in losses.

**SLOW INFORMATION DIFFUSION**

A market-level phenomenon in which new information is incorporated into prices gradually rather than instantaneously. This may reflect limited attention, processing constraints, dispersed information across investor groups, or institutional frictions. Slow diffusion can give rise to short- to medium-term return persistence.

**UNDERREACTION**

A systematic behavioural response in which investors adjust prices insufficiently in response to new information. Instead of fully updating expectations immediately, they revise beliefs gradually, resulting in continued price movement in the direction of the initial news over subsequent periods.

MILESTONES IN THE STUDY OF BEHAVIOURAL INVESTING

1981	Shiller documented excess volatility in stock prices relative to fundamentals, challenging the strictest form of market efficiency and opening the door to behavioural interpretations of asset prices.
1985	De Bondt & Thaler provided the first systematic evidence of long-horizon return reversal, establishing overreaction as a measurable market phenomenon.
1990	Bernard & Thomas documented post-earnings announcement drift, providing clear evidence of underreaction to new information.
1992	Fama & French demonstrated that book-to-market predicts cross-sectional returns, institutionalising the value premium within asset pricing.
1993	Jegadeesh & Titman identified intermediate-term momentum (3–12 months), showing that past winners continue to outperform, challenging simple efficiency models.
1994	Lakonishok, Shleifer & Vishny argued that the value premium is more consistent with investor extrapolation bias than with compensation for distress risk.
1997	Carhart incorporated momentum into the four-factor model, formalising it as a systematic return factor.
1998	Daniel, Hirshleifer & Subrahmanyam developed a behavioural model linking overconfidence and biased self-attribution to underreaction and eventual overreaction.
1998	Rouwenhorst demonstrated that momentum effects are robust internationally, strengthening the case for a structural rather than local anomaly.
1999	Hong & Stein provided a unified theory of underreaction, momentum, and overreaction based on gradual information diffusion across heterogeneous investors.
2006	Baker & Wurgler constructed an empirical investor sentiment index, linking behavioural sentiment directly to cross-sectional return patterns.
2016	Daniel & Moskowitz analysed momentum crashes, showing how crowded trades and funding shocks produce episodic reversals consistent with behavioural and limits-to-arbitrage explanations.

RISK PREMIA OR BEHAVIOURAL MISPRICING?

Observed premia such as momentum or value are consistent with two competing explanations:

- (i) compensation for systematic risk; or
- (ii) correction of behavioural mispricing.

Adherents of (i) hold that these premia exist because they compensate investors for bearing additional systematic risk. Value stocks may outperform because they are fundamentally riskier (for example, they may be more distressed, more cyclical, or more exposed to economic downturns). Momentum may earn a premium because it increases crash risk or other hidden macroeconomic risks. Modern asset pricing models have incorporated these premia into multifactor frameworks (Fama & French, 1993; Carhart, 1997), treating them as equilibrium risk factors rather than anomalies. From this perspective, excess returns are seen as compensation for risk rather than as market mispricing.

However, behavioural explanations offer a complementary interpretation. If investors systematically extrapolate recent trends, anchor to past prices, or underreact to new information (all forms of behavioural bias), then prices can deviate from fundamental value in predictable ways. The resulting return premia may reflect the gradual correction of those distortions.

Behavioural and risk-based explanations are not mutually exclusive. Behavioural mispricing may itself create endogenous risk exposures. For example, crowded momentum trades may become vulnerable to sharp reversals when sentiment shifts.

Tests that would favour behavioural explanations include stronger effects in hard-to-value stocks, sensitivity to retail flows, and post-earnings drift. Tests that would favour risk explanations include priced macro risk exposures that are consistent across all stocks.

The key question may be not whether markets are perfectly efficient or entirely irrational, but whether persistent psychological biases interact with market structure in a way that generates predictable patterns. In our view, the evidence suggests that they do.



HISTORICAL ILLUSTRATIONS OF BEHAVIOURAL DYNAMICS

Financial history offers vivid illustrations of behavioural cycles. Here are three.

1

In the late 1990s, rapid price appreciation in technology firms reinforced extrapolative beliefs about the internet's earnings potential. Valuations detached from fundamentals and, upon the revelation of weaker-than-expected cash flows, the market corrected sharply (2000–2002).

2

The global financial crisis (2008) provides another example. Prior to 2008, rising housing prices and structured credit innovation fostered complacency. Negative signals were initially underweighted. When confidence faltered, the reversal was abrupt, reflecting delayed overreaction to accumulating risks.

3

More recently, periods of intense retail participation and social media-driven narratives (meme stocks) have demonstrated how quickly herding behaviour can influence price dynamics.

In each case, the interplay between underreaction, extrapolation, and eventual reversal may be detected.

WHY ARBITRAGE DOES NOT ELIMINATE BEHAVIOURAL EFFECTS

An objection to the persistence of the effect of psychological biases on markets is: how do these anomalies survive the process of arbitrage? If the effect is known, why is it not arbitrated away? One answer is that even though some market agents may be rational, not all are. It is very difficult for even highly rational investors to keep their head when all about them are losing theirs, to paraphrase Rudyard Kipling. Investors feel safer in herds.

To be sure, there are cases where arbitrage has been successful. Examples are event-driven strategies, and merger arbitrage. But the theoretical position that rational investors should eliminate mispricing is ... too theoretical, in our view. In practice, arbitrage is neither riskless nor unconstrained.

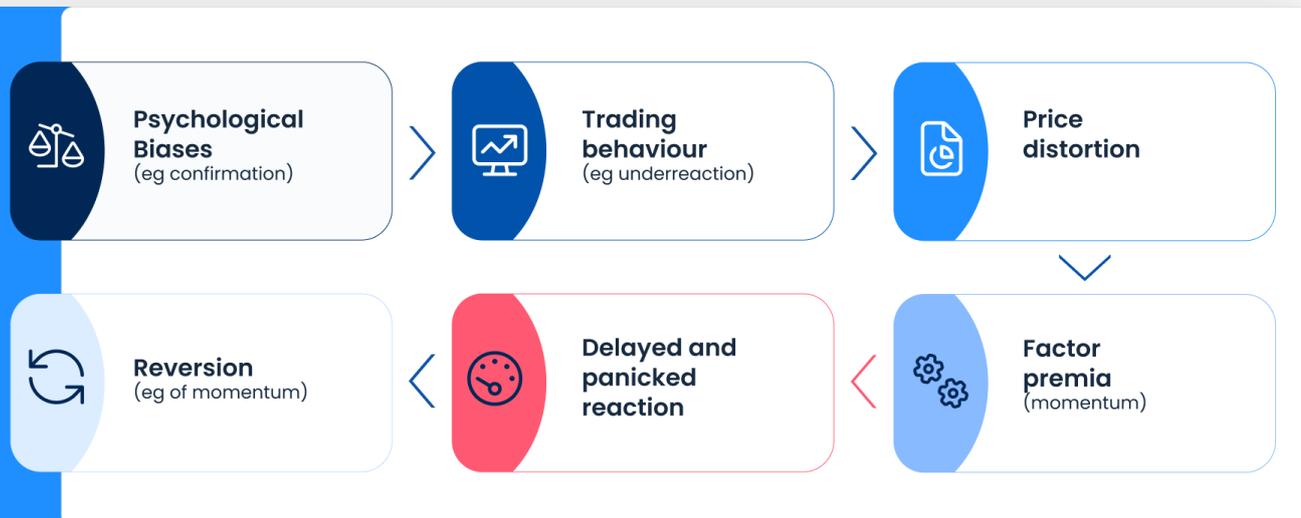
Shleifer and Vishny (1997) show that arbitrageurs are subject to funding risk: if mispricing widens before it corrects, investors may withdraw capital, forcing positions to be liquidated at precisely the wrong time. Because arbitrage capital can be withdrawn during drawdowns, mispricings can widen before they converge, producing the long droughts and crashes empirically observed.

Professional investors also face career risk. Acting against consensus can be professionally dangerous, even if ultimately correct. Herding may therefore arise not from ignorance, but from incentives. Institutional constraints, including benchmark tracking, leverage limits, and regulatory requirements, further restrict the ability to take contrarian positions.

Moreover, mispricing can persist longer than rational investors can remain solvent. Behavioural biases do not operate in isolation; they are reinforced by narrative contagion, media amplification, and social proof. In such environments, the risk of arbitraging against crowd psychology may outweigh the expected return.

In this sense, behavioural premia survive not because they are unknown, but because exploiting them requires patience, capital resilience, and tolerance for extended drawdowns.

How psychological biases can lead to momentum rallies and reversals



Source: Jupiter. For illustrative purposes only.

MOMENTUM

Is it possible for systematic investors to exploit behavioural biases? We believe so. One simple way in which this may be attempted is through the momentum factor. Momentum is where stocks that performed well in a period $t=1$ also perform well in the subsequent period $t=2$. Several academics have proposed behavioural models that would explain the presence of the momentum factor in markets. A delayed overreaction to information would push the prices of winning stocks higher, and of losing stocks lower.

Jegadeesh and Titman (1993, 2001) find positive performance of a momentum portfolio over the first 12 months, and negative performance in months 13 to 60. They suggest this coheres well with the behavioural explanation. After the period of delayed overreaction, there is a reversion to fundamental values. This reversion would be harder for other, non-behavioural theories to explain. If momentum were pure compensation for a stably priced risk, it would be less prone to abrupt crashes; the observed pattern of episodic strong performance interspersed with severe drawdowns is more naturally explained by behavioural amplification and limits to arbitrage.

Hong & Stein (1999) present a model in which there are two types of agent: newswatchers and momentum traders. Newswatchers observe information that diffuses slowly, causing prices to adjust gradually (underreaction). Momentum traders follow trends based on past price changes. The chart below is based on an implementation of their model.

AFTER HONG & STEIN (1999): CUMULATIVE IMPULSE RESPONSE



Source: Jupiter. For illustrative purposes only.

BEHAVIOURAL PREMIA ARE REGIME DEPENDENT

Behavioural premia are not constant. Momentum can perform strongly for years, only to suffer abrupt drawdowns. Value can experience prolonged droughts before sharp recoveries. These cycles reflect changes in market structure, liquidity conditions, and investor participation.

Periods of abundant liquidity and strong narratives may amplify herding and extrapolation, strengthening momentum effects. Conversely, abrupt macroeconomic shocks or rapid changes in policy can trigger violent reversals as crowded trades unwind.

Similarly, value strategies tend to perform best following episodes of excessive optimism, when growth expectations have been extrapolated too far into the future. When narratives break and sentiment shifts, prices may revert sharply toward fundamental measures.

Understanding this cyclical nature is essential for investors. For us, this means dynamic rotation is a key part of our process, although, as mentioned, we do not use generic, simple factors but more complex, proprietary strategies developed over more than 20 years of research.

WHY BEHAVIOURAL BIASES PERSIST

One might expect that advances in technology, data availability, and algorithmic trading would eliminate behavioural inefficiencies. Yet biases persist. Markets continually refresh their participants. New cohorts of investors enter with limited experience, while institutional incentives remain largely unchanged.

Moreover, technological innovation may amplify, rather than dampen, certain biases. Social media accelerates information diffusion but also intensifies narrative contagion. Passive investment vehicles may reinforce price trends by mechanically allocating capital toward recent winners. Passive investing may accelerate momentum.

Human psychology evolves far more slowly than market structure. Anchoring, overconfidence, and loss aversion remain deeply rooted cognitive traits. As long as markets aggregate human decision-makers operating under uncertainty and incentive constraints, behavioural distortions are likely to endure.

Behavioural finance provides an explanation for many persistent factor premia. Systematic strategies translate these insights into disciplined, repeatable exposures, but they require careful governance, awareness of regime risk and capacity constraints, and humility about the limits of any single model. When combined with robust risk controls and cross-factor diversification, a behavioural framework offers a defensible and enduring basis for systematic alpha.

In our view, real-world markets are rich with opportunities for exploiting behavioural biases. In this paper, we have focused on some simple, generic factors, particularly momentum, because these are easy to understand and have been widely discussed in the academic literature. However, it should be noted that our own practice does not use such simple, generic factors. Instead, we have devoted considerable research, over a period of more than two decades, in collaboration with leading academics, to originating proprietary stock selection strategies that go beyond generic factors such as momentum or value. Part of the advantage of our proprietary strategies is that we have been able to isolate which part of each behavioural anomaly can be a source of alpha, and which is a cyclical risk factor that we seek to control or neutralise. Our research program, in collaboration with a wide number of leading academics, continues, and we would be happy to provide more details to clients on request.

Baker & Wurgler (2006) Investor Sentiment and the Cross-Section of Stock Returns. *Journal of Finance*, 61(4), 1645–1680.

Carhart, M. (1997) On Persistence in Mutual Fund Performance. *Journal of Finance*, 52(1), 57–82.

Daniel, K., & Moskowitz, T. (2016). Momentum crashes. *Journal of Financial Economics*, 122, 221–247.

De Bondt, W., & Thaler, R. (1985). Does the stock market overreact? *Journal of Finance*, 40(3), 793–805.

Fama, E. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance*, 25, 383–417.

Fama, E., & French, K. (1992). The cross-section of expected stock returns. *Journal of Finance*, 47, 427–465.

Fama, E., & French, K. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33 (1), 3–56.

Jegadeesh, N., & Titman, S. (1993). Returns to buying winners and selling losers. *Journal of Finance*, 48(1), 65–91.

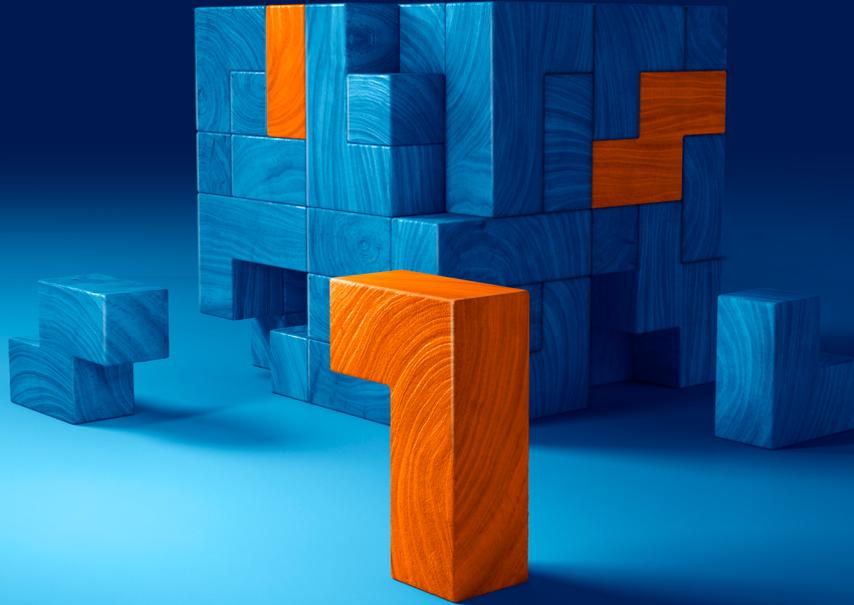
Jegadeesh, N. & Titman, S. (2001). Profitability of Momentum Strategies: An Evaluation of Alternative Explanations. *Journal of Finance*, 56(2).

Hong, H. & Stein, J. (1999). A Unified Theory of Underreaction, Momentum Trading and Overreaction in Asset Markets. *Journal of Finance*, 54(6), 2143–2184.

Kahneman, D. & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2).

Keynes, J.M. (1936) *The General Theory of Employment, Interest and Money*.

Lakonishok, J., Shleifer, A., & Vishny, R. (1994). Contrarian investment, extrapolation, and risk. *Journal of Finance*, 49(5), 1541–1578.



The value of active minds – independent thinking: A key feature of Jupiter's investment approach is that we eschew the adoption of a house view, instead preferring to allow our specialist fund managers to formulate their own opinions on their asset class. As a result, it should be noted that any views expressed – including on matters relating to environmental, social and governance considerations – are those of the author(s), and may differ from views held by other Jupiter investment professionals.

IMPORTANT INFORMATION: This marketing document is intended for investment professionals* and is not for the use or benefit of other persons. This document is for informational purposes only and is not investment advice. Market and exchange rate movements can cause the value of an investment to fall as well as rise, and you may get back less than originally invested. The views expressed are those of the individuals mentioned at the time of writing, are not necessarily those of Jupiter as a whole, and may be subject to change. This is particularly true during periods of rapidly changing market circumstances. Every effort is made to ensure the accuracy of the information, but no assurance or warranties are given.

Issued in the UK by Jupiter Asset Management Limited (JAM), registered address: The Zig Zag Building, 70 Victoria Street, London, SW1E 6SQ is authorised and regulated by the Financial Conduct Authority. Issued in the EU by Jupiter Asset Management International S.A. (JAMI), registered address: 5, Rue Heienhaff, Senningerberg L-1736, Luxembourg which is authorised and regulated by the Commission de Surveillance du Secteur Financier. No part of this document may be reproduced in any manner without the prior permission of JAM/JAMI.

*In Singapore, investment professionals means accredited and/or institutional investors as defined under section 4A of the securities and futures act ("SFA") and in Hong Kong professional investors as defined under the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong).