

Resolution Insights

Managing Biases in Investing

PRIVATE & CONFIDENTIAL

MARKETING INFORMATION FOR PROFESSIONAL INVESTORS ONLY

Your attention is drawn to the disclaimer

This *Resolution Insights* piece explores several tools and methods we use to optimise risk-adjusted returns. We highlight the risks of emotional and behavioural biases, and how we mitigate them through set processes, checklists, and stop loss discipline. We also explore the impacts of firm structure and incentives on performance, and how we have designed Resolution to align with the best interests of our clients.

As an independent founder-led firm, we have the freedom to implement what we believe are best practices – unlike legacy institutions bound by entrenched rules and often competing priorities.

We hope you find this engaging and insightful into our efforts to deliver for clients. We are always looking to improve, so your feedback is very welcome!

With best wishes,

The Resolution Team

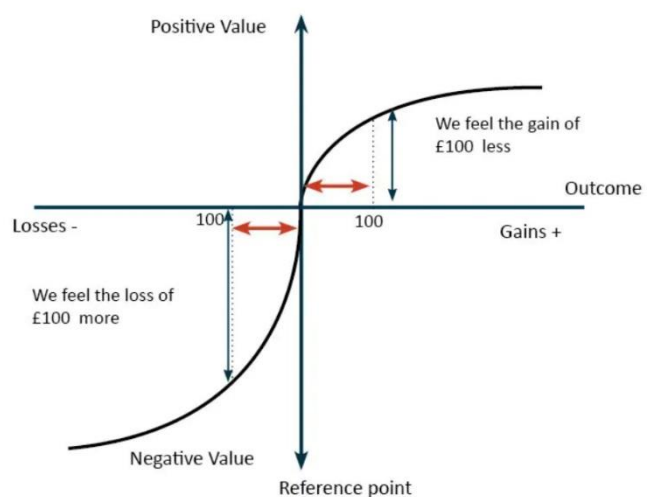
Resolution Investors LLP (FRN: 1029032) is an appointed representative of Thornbridge Investment Management LLP (FRN: 713859) which is authorised and regulated by the Financial Conduct Authority.

Emotions and Behavioural Biases

Ideally our judgements would always be perfectly reasoned. Regrettably we remain human, prone to emotions that distort perception and cloud decision-making. Emotions and related behavioural biases are very powerful forces, as explored in the field of Behavioural Finance, by Daniel Kahneman and others.

Many other industries are aware of these biases. Car salespeople, for example, exploit the *Endowment Effect* by letting potential buyers take a car home for the weekend. Once they “own” it, returning it feels much harder. In investing, this bias can lead managers to value a stock in which they have a position more highly than its fair value – often to the detriment of other opportunities with better risk-reward characteristics.

Another powerful bias is *Loss Aversion*. Behavioural psychologists have shown that people feel the pain of losses (financial or other) about twice as intensely as the pleasure of gains. This is hard-wired into our brains, linked to the survival instinct, but often leads to poor risk-taking and decision-making. So, indebted gamblers often chase losses, desperate to “get back to even”, leading to ever-riskier bets. Nick Leeson’s downfall at Barings Bank is a case in point!



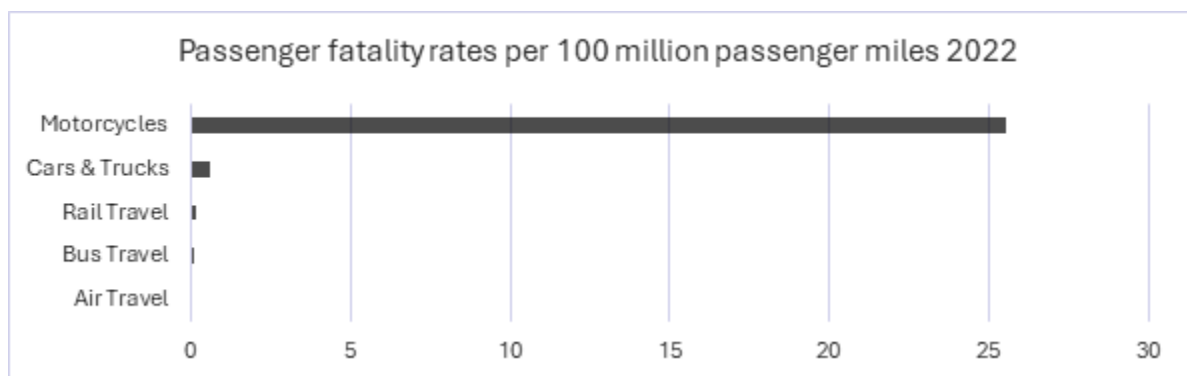
Critically, self-awareness of biases offers very little defence against their effects. While many investment firms acknowledge these challenges, most do not deploy tools to manage them, often leading to sub-optimal decisions. Investors benefit from “external help” – below, we outline how our structured processes, including checklists and stop loss discipline, help mitigate these risks.

The Power of Processes and Checklists

At Resolution, we embrace repeatable processes. These are codified rules and steps - often utilising written checklists - built on our experience and expertise.

They ensure consistency in applying best practices across our team and our portfolio. They provide a thorough and reliable guide, especially in moments of stress when judgment may be impaired. They also create a 'common language' for clear communication and constructive debate. Moreover, they can be refined and improved over time, allowing for adjustment as we learn.

Processes and checklists are widely used to great effect in industries - air travel is a prime example. As the chart below shows (U.S. Transport Statistics Bureau), airline safety records are exceptionally strong and have improved significantly over time - a result of rigorously followed and continuously improved processes.



By contrast, as the chart regrettably illustrates, road transport relies heavily on individual execution, resulting in significantly worse outcomes. The limited scope for safety improvements on motorcycles explains their huge outlier position.

A similar example is found in the healthcare sector, where the widespread use of checklists in operations highlights their critical role in enhancing safety. In short, when lives are at stake, robust processes are known to be key. We apply this same principle to our analysis and portfolio management.

One key pillar of our investing approach is the use of checklists for evaluating Business Quality and People & Leadership Quality. Every company on our Target List - approximately 90 companies that represent the strategy's formal investment universe - have been scored against these checklists.

These checklists create the common ‘features’ that allow us to compare companies across very different sectors. For each topic, we answer a series of questions, which ensures thoroughness and even-handed comparability. Critically, we can add and evolve the questions, allowing for continual improvement.

Business Quality

1. Customer Value Proposition
2. Competitive Advantages
3. Economics and Growth Potential
4. Industry and Ecosystem Health
5. Sensitivity to External Factors

People & Leadership Quality

1. Culture and Staff Engagement
2. Alignment and Incentives
3. Execution Track Record
4. Capital Allocation
5. Governance and Protection

Another key discipline we follow is a stop loss. We share our broad thoughts below, and provide more detailed analysis in the Appendix.

Kill Switches & Stop Losses

Looking again across industries for context, many companies rely on ‘kill switches’ as critical and typically automated safety mechanisms to prevent accidents, damage, or catastrophic failures.

Factory Production lines use E-Stop buttons, oil rigs have blowout preventers, nuclear reactors employ SCRAM systems to halt fission reactions if dangerous conditions arise; and, closer to home, the NYSE has automatic trading halts if market volatility exceeds certain thresholds.

Investing is inherently a low-percentage endeavour, thanks to the challenges of predicting the future! Indeed, the percentages are far lower than many would like to admit - a strong ‘investment hit rate’ is 60%. This means that, even for the most capable investors, being wrong is a regular occurrence.

For us, we believe that, when a stock moves against us or mistakes are made, it is crucial to avoid significant losses. Our approach is to utilise a stop loss to prevent 'meltdowns', and also to manage behavioural biases.

Put simply, a stop loss is investing's equivalent of a kill switch - an automatic safe-guard, designed to protect us and our clients if things are at risk of going wrong.

The rule we follow is if a company share price significantly underperforms the market over the prior 12 months (or since initiation, if shorter), we are required to reduce or fully sell out. We may revisit and reinvest, but only after a sufficient cooling-off period.

Now, we are under no illusions that stop losses always work, in the same way that investments do not always pan out as expected. There are times when it would be better not to exit a position that has performed poorly. We also recognise the logical tension that stop losses seem to contradict the long-term investor ideal of "being greedy when others are fearful, and fearful when others are greedy" - an adage we strongly follow. However, we believe a stop loss is valuable for several reasons.

First, successful investing is often about managing the percentages. Our own technical analysis, the academic literature, and our extensive experience through challenging markets all indicate that, when applied correctly and continuously over time, a stop loss can significantly enhance portfolio risk-adjusted returns. We present more details in the Appendix.

Second, a stop loss helps us to dampen emotions and biases. While companies and circumstances will vary in each case, of one thing we can be certain every time that our stop loss comes into effect - there will be a heady cocktail of biases, including endowment effect and loss aversion. These usually come with the old-fashioned but still tricky challenge of having to admit you got something wrong. The value of a 'kill switch' to limit such struggles, to reset, and then be able to go again with a clear head is significant.



Third, a stop loss prevents individual investments consuming disproportionate time and effort. Allowing a small 3% position to absorb 20% of your focus is a critical error, with the opportunity cost often felt in misses and errors elsewhere.

Finally, as noted, triggering a stop loss does not force us to permanently remove the name from our Target List. Just as a factory line, which has triggered a kill switch, can restart once it has passed its checks. So, we can choose to reinvest in a company if our reassessment is favourable, and after an appropriate time-out to reset our anchors and emotions.

Why firm structures & incentives matter

We discussed above how clear investment processes can enhance risk-adjusted returns. While they usually receive less attention, we believe the organisational structures and incentives within investment firms are also critical for guiding behaviours and ensuring decisions are aligned with the best interests of their clients. The unfortunate reality is that these features are often sub-optimal. At Resolution, we have considered these carefully.

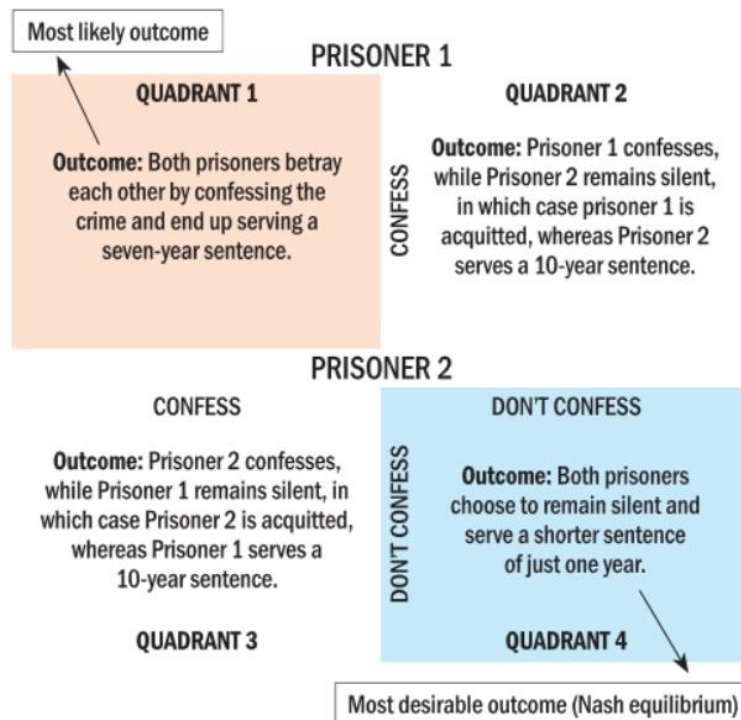
Incentives are related to biases, in their power to influence decisions and actions. As Charlie Munger said: *“Show me the incentive and I’ll show you the outcome.”*

In evaluating companies, one key factor on our People and Leadership Quality checklist is Alignment and Incentives. We look for management who have a long-term stewardship mindset, and for incentives that avoid short-termism and support value creation for shareholders. The same principles apply at investment firms – we have taken specific steps here.

First, while we have clear individual divisions of labour, we are collectively responsible and incentivised on our overall strategy performance. We call this our *One Team* approach. In economics, collective ownership can sometimes lead to ‘free rider’ problems. In our case – a close-knit group of six who have known each other for many years – we do not see this as a real risk.

In contrast, firms that strongly prioritise individual incentives often, however inadvertently, encourage problematic behaviours. In extremis, a Prisoner’s Dilemma (the Game Theory test where two people have competing incentives) encourages individuals to act for personal purposes, rather than to optimise for the overall success of the fund.

Pay-off matrix for the prisoner's dilemma



These circumstances can lead analysts within an investment firm to aggressively prioritise 'their' ideas, with highly optimistic forecasts. Such internal warring is a recipe for ongoing strategy underperformance.

Second, we have chosen not to charge performance fees as standard. Our starting point here is that charging extra for doing your job is unusual. More seriously, performance fees, particularly combined with heavy individual pay rewards, encourages aggressive risk-taking. The potential for sizeable financial gain over a short time period is just too tempting for some.

Similarly, for funds sitting below their high watermarks, the financial incentive is to 'swing for the fences'. Even for those not so motivated, loss aversion (versus the watermark) comes into play.

In summary, we encourage asset allocators to examine fund structures and incentives, as they often reveal key insights into 'the inner workings'. At Resolution, we prioritise alignment - both within our team and with our clients.

The Resolution Team

Appendix – our stop loss framework

As noted above, we employ a systematic stop loss protocol - we delve deeper here into its application and purpose.

Upfront, we stress that the stop loss is not a substitute to ongoing company and portfolio reviews, but rather a complementary safeguard. We are continuously assessing new information and adjusting our views accordingly. We would never say: *“We might as well wait, we are close to a stop loss trigger!”*.

Fundamentally, this process is a recognition that sometimes our inputs may be flawed, sometimes our reasoning may be faulty, and also frankly sometimes, as Keynes quipped, *“Markets can stay irrational longer than you can stay solvent”*. With that in mind, we would rather put capital preservation ahead of ego.

The Triggers

The stop loss operates in two stages, using end of day or auction prices:

- **First Trigger: A 25% Drawdown Relative to Benchmark**

If a position underperforms our MSCI World benchmark by 25% over a 12-month period (or since average entry price, if the position is newer), we sell at least 50% and initiate a formal review.

The lead and secondary analysts actively debate the investment case, with the broader team cross-examining key assumptions. *Were our expectations incorrect? Are we suffering from thesis drift? Given current information, would we invest today?* If the case remains compelling, we may reinvest, but only after a six-week cooling-off period to reset emotional anchors.

- **Second Trigger: A 35% Drawdown Relative to Benchmark**

If the position declines by 35% in total, we fully exit and impose an 18-week minimum re-entry period - long enough to avoid any residual attachment to the original position.

We note three points:

1. Execution depends on circumstances but follows swiftly after a trigger.
2. By benchmarking against the index, we avoid multiple triggers in broad market downturns.
3. Given the higher overall quality of our coverage, as well as our diversification across exposures and geographies, we do not expect triggers to be frequent. This is confirmed by our back-testing - on which more below.

The research behind our approach

Setting and following strict rules can feel unnatural, but the benefits can also be substantial - particularly in high-stress situations where behavioural biases come into play. Our stop loss framework is grounded in a combination of internal research, academic studies, and real-world experience.

Intuitively, one might assume that a stop loss approach, which forces an investor to 'sell low', would erode returns, yet the evidence suggests otherwise. We back-tested our formulation on real stock returns over the past decade across multiple sets of stocks, including:

1. **Current S&P 500:** Equal-weighted holdings in current S&P constituents.
2. **Historic S&P 500:** As above, but using constituents from a decade ago.
3. **Current MSCI World**
4. **Resolution Target List**

Across all scenarios, the Sharpe Ratio was superior for portfolios implementing our Stop Loss protocol. While the absolute impact on annualised returns was modest, the reduction in portfolio volatility was significant (by 4-7%), leading to an improved risk-adjusted return profile. We examined different stop loss levels and periods, and found that our experience-based levels were robust and not highly localised or sensitive to minor adjustments. This increases our confidence that the process should provide similar benefits going forwards.

This concurs with the academic studies which consistently highlight trailing stop losses as the most effective methodology¹, typically yielding a neutral or modestly positive impact on performance whilst significantly reducing volatility.

¹ Tooth (2013); Snorrason & Yusupov (2009); Kaminski & Low (2014)

Furthermore, research has repeatedly demonstrated how *prospect theory*² causes the *disposition effect*³ in real world portfolios, where investors hold on to losing positions for too long whilst selling winners too soon.

A multi-year study of 7,828 UK retail investors, published in the European Journal of Finance in 2015, showed that they were 160% more likely to sell a stock at a gain than breakeven, and 35% less likely to sell a stock at a loss than breakeven (controlled for time held, market moves and investor skill, among other factors).

Implementing a simple stop loss process would have significantly closed this gap, by decreasing the probability of selling winners (which continued, on average, to gain) by 22% and increasing the probability of selling losers (which continued to lose) by 38%. These data points have been robustly replicated in many other markets, demonstrating that the power of stop losses is hugely increased when 'real world' behavioural biases are considered in the analysis⁴.

Closing thoughts

Investing is inherently about balancing probabilities. With this, minimising severe mistakes is just as important as maximising gains. It is also about creating the best environment to support analysis and rational decision-making. The Stop Loss is a tool in our arsenal here.

Finally to note, while our stop loss process follows a fixed set of rules, those rules themselves are not set in stone. Thoughtful portfolio management is an ongoing process of refinement, evolution, and testing new methodologies. We are confident in the robustness of our current framework, but will continue to explore improvements. Avenues of research in this area include adjusting drawdown thresholds based on volatility rather than using fixed percentage declines, and exploring the benefits to our portfolio as we accumulate sufficient data.

² Kahneman & Tversky (1979); Thaler (1985); Glaser, Nöth, & Webe (2004)

³ Shefrin & Statman (1985)

⁴ UK - Richards (2015); China - Chen et al. (2007), Feng & Seasholes (2005); Taiwan - Barber, Yi-Tsung, Yu-Jane, & Odean (2007); Israel - Shapira & Venezia (2001); Finland - Grinblatt & Keloharju (2001); Australia - Brown et al. (2006); France - Broihanne, Merli, & Boolel-Gunesh (2008); Portugal - Leal, Armada, & Duque (2008); Germany - Weber & Welfens (2008)

Disclaimer

The information provided herein should be considered as non-independent and prepared for marketing purposes only and is highly confidential and proprietary to Resolution Investors LLP (“Resolution”) and may not be copied, reproduced, disseminated or distributed without Resolution’s prior written consent. Any unauthorized review, use, disclosure or distribution is strictly prohibited. Resolution is an appointed representative of Thornbridge Investment Management LLP which is authorised and regulated by the Financial Conduct Authority (“FCA”).

This document shall not constitute an offer to sell, or the solicitation of any offer to buy, any interest in any Fund that may be operated and promoted by Harrington Cooper LLP or Resolution (herein, the “Fund”) or any other investment or strategy to which reference is made or implied. To the extent that any such offer or solicitation will be subject to the Offering Memorandum and other relevant investment documents that contain important information (including investment objective, policies, risk factors, fees, tax implications and relevant qualifications), and then only in those jurisdictions where permitted by law. Such information may be subject to updating, verification or amendment and may change materially. Accordingly, this information will not form the basis of, and should not be relied upon in connection with, any subsequent investment in the fund.

By acquiring an interest in the Fund, and without limiting the generality of the Offering Memorandum and other relevant investment documents, investors acknowledge and agree that (i) information provided by the Fund, Resolution Investors, or any of its or their respective affiliates (including this document and the Offering Memorandum) is not a recommendation to invest in the Fund and that none of the Fund, Resolution or any of its or their respective affiliates is undertaking to provide investment advice, impartial or otherwise, or to render advice in a fiduciary capacity in connection with any investment or prospective investment in the Fund; (ii) Resolution and its affiliates have a financial interest in investments in the Fund on account of the fees and other compensation they may earn from the Fund as disclosed in the Offering Memorandum and other relevant investment documents.

Any investment in the Fund is speculative and involves a high degree of risk. There is no guarantee that the Fund’s investment objective will be achieved. Moreover, the past performance of the Fund and the investment team should not be construed as an indicator of the Fund’s future performance or a guarantee of future returns. An investor should not consider investing in the Fund unless the investor is prepared to lose all or a substantial portion of its investment. Investors should make their own investigation and evaluation of the Fund. Investors should inform themselves as to the legal requirements applicable to them in respect of the Fund, and the income and other tax consequences to them of holding interests in it.

Resolution makes no representation as to the performance metrics of any third-party organizations or the achievement of underlying impact goals. Where applicable, achievement or compliance with these metrics should be evaluated over the longer-term rather than any shorter time periods indicated.

Any case studies are provided solely to illustrate the types of investments that Resolution pursues. They do not represent all investments made by, or outcomes achieved by, Resolution or the Fund. Examples of investments referenced herein were selected for inclusion based on objective, non-performance based criteria for the purpose of describing the investment

processes and analyses the Adviser uses to evaluate such investments. Investment rationales and other considerations are based on Resolution Investors' internal analysis and views as of the date those views were formed; they have not been and will not be updated. No statement should be considered a recommendation of any security or investment.

Information is provided to discuss general market activity, industry or sector trends, or other broad-based economic, market or political conditions. Economic, regulatory and market forecasts presented herein reflect our judgment as of the date of this presentation and are subject to change without notice. These forecasts are subject to high levels of uncertainty that may affect actual performance. Accordingly, these forecasts should be viewed as merely representative of a broad range of possible outcomes. These forecasts are estimated, based on assumptions, and are subject to revision and may change materially as economic and market conditions change.

This communication is exempt from the prohibition in section 21 of the Financial Services and Markets Act 2000 on the grounds that it is made to or directed only at investment professionals within the meaning of Section 19 of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005.

Harrington Cooper LLP is authorised and regulated by the Financial Conduct Authority (FRN 529866), registered in England and Wales as a limited liability partnership (number OC319697, registered office: The Royal Exchange, 2 Royal Exchange Steps, London, EC3V 3DG, United Kingdom.

© Resolution Investors LLP 2025. All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Resolution Investors LLP.

Resolution Investors LLP (FRN: 1029032) is an appointed representative of Thornbridge Investment Management LLP (FRN: 713859) which is authorised and regulated by the Financial Conduct Authority.



Contact Us

Resolution Investors LLP
Clients@resolutioninvestors.com

Harrington Cooper LLP
Team@harringtoncooper.com
Tel: +44 20 7043 0501