Orbis
Invest Differently

1 October 2024

The Art and Science of Assessing and Developing Investment Talent

A rigorous, data-driven approach to assessing and developing our investment decision-makers is central to the Orbis flywheel, which we believe makes our firm unique. When applied over time, it has allowed us to develop multiple generations of skilled investment decision-makers while continuously replenishing the pipeline with fresh, independent-minded talent driven to improve. We continue to reinvest in and refine this capability and believe it helps to maximise the value we add for clients today, while also ensuring we are positioned to meet their needs well into the future.

- Like winning sports franchises, the best investment teams have systems that support the data-driven assessment and development of talent.
- At Orbis, we collect a uniquely rich set of data on investment decisions made across the investment process using our paper portfolio system and other tools.
- This data is used by our Performance Team and investment leaders to assess ability and potential before analysts are given the responsibility of directing client capital.
- Our Decision Analytics Team leverages this same data to improve decision making by helping to identify and mitigate behavioural biases of individual decision-makers.

BUILDING A WINNING INVESTMENT TEAM

Investment management has much in common with professional team sports. Both are intensely competitive endeavours that require a combination of individual talent and organisational excellence. It's one thing to deliver superior investment performance—or an NBA championship—in a given year or season; it's quite another to do it consistently over long periods of time. Great athletes and investors are not only rare, but their careers can be limited for a variety of reasons. Some face setbacks and never live up to their full potential, others lose their touch over time because they fail to evolve, and even the best inevitably retire.

The best investment teams and sports franchises are those that have developed continuity over generations with systems to identify and develop promising new talent, tools and data to assess strengths and weaknesses and support continual improvement, and the expert judgement to ensure that the right people are in the right roles. There is no single approach to success here. In the world of sports, some teams, such as the 2002 Oakland A's of 'Moneyball' fame, excelled in the superior use of analytics, while others, like FC Barcelona, are known for player development programmes.

This paper discusses our own unique approach to assessing and developing our investment decision-makers. One that we believe helps to maximise the value we add for clients today, while also ensuring we are positioned to meet their needs well into the future.

THE IMPORTANCE OF GREAT DATA

When Michael Lewis wrote 'Moneyball' in 2003, the idea of "analytics" in sports was still relatively new. Back then, baseball talent scouts and team managers relied heavily on gut instinct when making decisions. Today, the analytics function is not only deeply embedded in many sports teams, but even casual fans are increasingly familiar with the concept. The key point of the analytics movement is not necessarily that data is superior—relying solely on either data or your gut can lead to poor outcomes—but rather that the best teams effectively combine data and judgement. It's less about "art versus science" and more about taking full advantage of both. But you do need both, and this is true also at investment firms.

The Art and Science of Assessing and Developing Investment Talent

At Orbis, the process for assessing and developing talent starts by collecting reams of data about individual investment decision-makers. Like the key stats in a basketball game (e.g. shooting percentages, rebounds), we track the key decisions that our analysts make to buy and sell stocks. The key tool used to collect data on analyst decisions—well before they are directing client capital in the Orbis Strategies—is something we refer to as our "paper portfolio" system. While it sounds basic, the paper portfolio system is a sophisticated training ground that simulates the same marketability constraints (e.g. impact costs, accumulation rates) that one would face when managing a real portfolio.

But the paper portfolio system is only one part of a broader infrastructure of proprietary tools used to collect data on investment decisions made across the firm and over the various phases of the investment process. In addition to buy/sell decisions made within paper portfolios and the Orbis Strategies, this much wider net captures "upstream" decisions made during the research process. This includes everything from advancing ideas through our phased research process to voting on new ideas considered in Policy Group Meetings, which is a forum for rigorous peer review. As a result, we now have a 30+ year data set of investment decisions (both pre- and post-investment) made at Orbis since the inception of the firm. This rich data set is ever-growing and at our fingertips to analyse.

PAPER PORTFOLIOS: OUR PLAYER DEVELOPMENT PROGRAMME

Our paper portfolio system is designed to enable analysts to express their best investment ideas in an environment that simulates the pressures and realities of stockpicking in the real world. In managing their own paper portfolio, analysts allocate a fixed amount of notional capital into approximately 10 stocks that they have researched in their area of expertise (generally a region or sector). The weighting of each stock is largely a signal of the analyst's level of conviction in the idea. The paper portfolio allows us to collect data on each decision an analyst makes. It serves as a critical development tool as analysts hone their skills and, over time, the performance of each analyst's paper portfolio, relative to a relevant benchmark, is a significant input into their remuneration.

The paper portfolio system is also the primary tool for determining responsibility for directing client capital. Before they are given the responsibility of directing client capital, Portfolio Managers at Orbis must demonstrate superior stockpicking skill and show great potential over several years in the paper portfolio system. In that way, the paper portfolio system is like the player development programme used to identify and develop talent for a professional sports team. Importantly, while excellent performance in paper portfolios is a prerequisite for taking on additional responsibility, it is not all that matters, and there are critical qualitative components as well. In other words, great performance in a paper portfolio is necessary but not at all sufficient to becoming a Portfolio Manager.

ASSESSMENT: BUILDING A MOSAIC

The below comes from Michael Mauboussin's book, 'The Success Equation'.

Skill x Execution x Luck = Performance

The first two variables—skill and execution—are things that one can control, and we spend an enormous amount of time and energy trying to get those right. But luck plays an undeniably important role in investing, especially in the short term.

The Art and Science of Assessing and Developing Investment Talent

Luck is where analysing performance in investments differs dramatically from the world of sports. While luck also plays a role on the basketball court, it is impossible to win an NBA championship purely through good fortune. In fact, according to Mauboussin, basketball is one of the sports where luck plays the smallest role. While there are other factors, this is mostly explained by the number of opportunities each team has to score in a given game—and therefore, the number of opportunities for skill to shine through. In an NBA basketball game, each team possesses the ball approximately 100 times. To bring this back to investing, a long-term stockpicker may research only a handful of stocks over an entire year. The other dynamic is the link between cause and effect. When there is a clear, direct link—like dunking a basketball equaling two points—luck plays a smaller role. But if, as in investing, the same decision repeated 100 times can yield wildly different results, the role of luck increases. All this means is that assessing skill in investing is a bit more complex and likely a lot less precise than it might be on the basketball court.

With a purely scientific approach, we would ideally analyse an analyst's decisions over a long period of time (across different market types) and develop a statistically significant conclusion about their degree of skill (or lack thereof). The problem with this approach—especially when analysing the few decisions made in a concentrated portfolio—is that it would take decades to prove that a strong track record was not simply random chance. Unfortunately, we don't have the luxury of waiting for that level of scientific evidence and must instead rely upon imperfect judgement when assessing skill. To help ensure this assessment is as objective and accurate as possible, we build a mosaic of as much quantitative and qualitative data as we can collect.

In the earlier stages of an analyst's career, the assessment is much more qualitative in nature (i.e. more "art"). The types of questions asked can be more subjective. *Are they able to accurately distill theses down to their most critical parts? Do they uncover valuable insights through their research process? Can they evaluate ideas in an efficient manner? If their performance is good, have they been "right" for the right reasons?*

As an analyst's career progresses, the mosaic becomes less qualitative and driven more by the hard numbers delivered in their paper portfolio and captured in our Analyst Scorecard. Importantly, even as the assessment becomes increasingly "scientific" as more data is collected, new qualitative questions will also emerge. Most notably, we want to understand how analysts behave during inevitable periods of underperformance. *Are they willing to admit when they are wrong? Do they maintain discipline in different market environments? Do they learn from their mistakes and improve their processes and decision-making?*

All this information feeds directly into our assessment of analysts. It drives remuneration decisions, the weight that Portfolio Managers place on analyst recommendations (i.e. who they listen to), and ultimately, the selection of new Portfolio Managers. At the risk of stating the obvious, we don't always get these decisions right. But we are confident that the rich dataset we analyse, combined with our dedicated expertise in performance assessment, goes a long way toward improving our chances.

[1]The ratio of outperforming or winning stocks relative to total stock positions for the period. Winning and losing stocks are calculated on their performance relative to the analyst' benchmark.

[2]Prior to a Policy Group Meeting, each attendee will have read the Phase Three research report and will have submitted a vote indicating whether they believe the idea is a buy. At the end of the PGM, attendees are given the opportunity to change their vote before a final vote is taken. Voting records are tracked for the entire investment team, but are not a factor as to whether a stock is bought in the Orbis Strategies. Voting records can offer valuable insight into the ability of an analyst to form a view on the idea of another analyst (a key skill for a Portfolio Manager).

OUR PERFORMANCE TEAM AND ANALYST SCORECARD

Our investment team leaders have ultimate responsibility for assessing analysts and the head of the investment team is responsible for leading the selection of Portfolio Managers. In all cases, they rely heavily on information provided by our Performance Team to support their assessment. Our Performance Team's primary responsibility is to identify the drivers of performance in paper portfolios and the Orbis Strategies. In addition to regular performance reporting, the team performs a wide range of bespoke analysis, including detailed assessments over multi-year periods. Such assessments are typically prepared when changes in an analyst's responsibilities, such as a promotion to Portfolio Manager, are being considered and they include analysis of both the hard numbers and qualitative insights into an individual's decision-making.

The key output from the Performance Team is the Analyst Scorecard, which is produced at mid-year and year-end for each analyst. The scorecard provides a detailed breakdown of returns in absolute and relative (e.g. versus the analyst's benchmark) terms, as well as other key performance metrics such as the success ratio[1], average and median performance of winners and losers, and capital allocated to winners and losers. It also includes data on the analyst's research contribution, including research activity (number of companies researched and number of reports written at each research phase) and Policy Group Meeting voting record[2]. An extract from a scorecard is shown in Appendix 1. This is typically supplemented by further information from the paper portfolio, including data on turnover, trading, and volatility.

DEVELOPMENT: THE POWER OF DECISION ANALYTICS

As important as performance assessment may be, it is only part of the reason for collecting and analysing data on decision-making. We think it's just as important to harness those insights to become better investors over time. Returning to our basketball analogy, analytics are not only used to evaluate players to determine who should be playing (i.e. directing client capital). The data is also extremely valuable for identifying strengths and weaknesses, and for refining practice routines, training, and future strategy (i.e. to ultimately play better and win more games).

In our view, the very best way to learn and improve as an investor is to make decisions. But we also prefer to hire analysts with little or no industry experience, so it would be irresponsible to allow them to "practise" with our clients' money. As an alternative, our paper portfolio system comes as close as possible to replicating both the constraints and pressures of real-world investing. Coupled with mentorship provided by more experienced investment decision-makers, feedback from the paper portfolio system has been the primary mechanism for analyst development at Orbis since the early 90s—delivering increasingly sophisticated insights over time as our resources and expertise in this area have grown.

In recent years, we have looked at new ways to apply technology (in-house and third-party), and techniques from the field of behavioural science to our rich set of data to provide our investors with deeper and more personalised insights into their past decisions. We refer to this work as, "Decision Analytics".

Our Decision Analytics Team has diverse expertise in performance analysis, data science and behavioural science, and supports our investment process in two ways. The first is by conducting in-depth analysis to identify individual patterns and behavioural biases in decision-making that can be shared with analysts. The second is by recommending and implementing personalised improvements to their individual processes (e.g. via behavioural "nudges").

A DATA-DRIVEN APPROACH TO TACKLING BIASES

Like all humans, investors have cognitive and behavioural biases that impair decision-making. In 1995, the renowned billionaire investor Charlie Munger famously described 25 such biases, like loss aversion, over-optimism and denial in a speech entitled, "The Psychology of Human Misjudgment". The aim of Decision Analytics is to take a more scientific and data-driven approach to spotting such biases. By creating self-awareness and implementing process enhancements, our Decision Analytics Team can help our analysts learn from past decisions and ultimately make better decisions in the future.

So how does the Decision Analytics process work in practice? A detailed description of the process is included below, and case studies are included in Appendix 2.

THE DECISION ANALYTICS PROCESS

1 **Preparation of an "exploration" report**	The Decision Analytics process normally begins with a detailed assessment of an analyst's decision-making history and the production of an initial "exploration" report. The analysis behind this report is made even more powerful given our data set captures the rationale behind decisions made at various points in the research process, not only the buy/sell decisions in an analyst's paper portfolio and/or the Orbis Strategies. This allows the team to go beyond a purely quantitative analysis of decisions made, by overlaying the emotions and qualitative factors that went into the decision to seek out signs of behavioural bias. By comparison, most external software providers rely exclusively on trading data to perform similar analysis (i.e. they only assess the buy/sell decisions).
2 **Discussion with the analyst**	The Decision Analytics Team then discusses the report and its key findings with the analyst, ensuring that the analysis and any potential process enhancements are tailored to individual investment styles/approach and the way the analyst sees the world.
3 **Implementation of process enhancements**	Once potential reasoning (including biases or emotions) behind decisions has been discussed, targeted process enhancements and bias mitigation techniques are agreed upon and implemented. In addition to behavioural "nudges" for the individual analyst, these might include enhancements to existing tools and/or the development of new ones, and workshops to discuss overall team behaviours or similar education sessions.
4 **Ongoing monitoring**	The steps above represent the initial phase of the process, but the development cycle is ongoing. The Decision Analytics Team will monitor how decision-making evolves and will complete updated explorations once the analyst has made enough new decisions to review. Similarly, analysts will fine-tune their use of any process enhancements, including, for example, customising the "intensity" (i.e. their frequency) of nudges on an ongoing basis to best meet their need.

By facilitating self-awareness of behavioural biases and implementing process enhancements, Decision Analytics ultimately helps ensure analysts are leaning into their strengths while working to improve areas that may be a source of missed opportunity. Like the process to assess an analyst, Decision Analytics involves

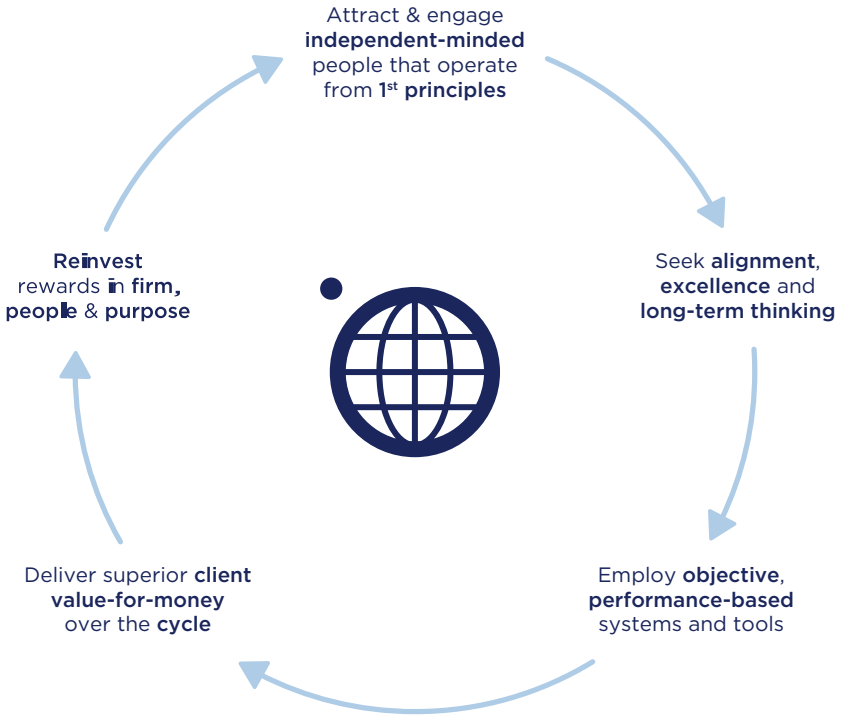
a great deal of art—in addition to science—and it does not come without risk. Indeed, the effort to correct biases can introduce new issues, known as "spillover effects". The Decision Analytics Team run behavioural audits of their nudge designs to guard for these effects, but we recognise that ultimately, improving decision-making is an iterative and ongoing process . As market environments change over time, our decision-making processes and the enhancements the team implements need to vary with them.

FOSTERING A CULTURE OF CONTINUOUS IMPROVEMENT

A rigorous commitment to assessing and developing our investment decision-makers is central to the Orbis flywheel (Figure 1 below), which we believe makes our firm unique. As with many aspects of the firm, our approach—which combines elements of old-school development programmes with new-age analytics—is designed to be self-reinforcing, by attracting the type of people who are most likely to thrive in an environment of objective performance assessment and continuous improvement.

When applied over time, it has allowed us to develop multiple generations of skilled investment decision-makers while continuously replenishing the pipeline with fresh, independent-minded talent driven to improve. As we continue to reinvest in and refine this capability, we believe it helps to maximise the value we add for clients today, while also ensuring we are positioned to meet their needs well into the future.

FIGURE 1: ORBIS FLYWHEEL



APPENDIX 1: EXTRACTS FROM AN ANALYST SCORECARD

Absolute performance

Relative performance

Overall performance

Stock-by-stock analysis

Aggregate stockpicking metrics

Paper Portfolio Performance Report — 15 Nov 2015 to 15 Nov 2016

A.N. Analyst Japan Paper Portfolio

Security	Capital Deployed	Price Perf (Absolute)	Contrib (Absolute)	Price Perf (vs Analyst's Benchmark: Custom)	Contrib (vs Analyst's Benchmark: Custom)	Price Perf (vs Strategy Benchmark: TOPIX)	Contrib (vs Strategy Benchmark: TOPIX)	Price Perf (vs Sector)	Contrib (vs Sector)
Total:	99.3	(12.1)		(5.3)		(3.9)		(3.8)	
Alpha*:			(12.1)		(5.3)		(3.9)		(3.8)
Company 1	12.1	4	0.6	10	1.7	12	2.0	18	2.4
Company 2	11.9	(15)	(2.4)	(9)	(0.8)	(8)	(0.5)	(13)	(0.7)
Company 3	8.5	(16)	(1.2)	(10)	(0.2)	(9)	(0.0)	(4)	0.2
Company 4	7.2	(60)	(5.7)	(57)	(5.4)	(57)	(5.3)	(59)	(5.6)
Company 5	6.4	(32)	(1.9)	(26)	(1.5)	(24)	(1.4)	(19)	(1.0)
Company 6	5.7	(4)	(0.2)	2	0.1	3	0.2	8	0.5
Company 7	5.6	(9)	(0.3)	(1)	0.0	1	0.1	(8)	(0.4)
Company 8	5.3	(11)	(0.6)	(5)	(0.2)	(4)	(0.2)	0	0.0
Company 9	5.1	(2)	(0.2)	4	0.2	6	0.3	5	0.3
Company 10	4.9	(6)	(0.1)	0	0.5	1	0.6	7	0.7
Company 11	4.8	(14)	(0.2)	(7)	0.1	(6)	0.1	(9)	(0.2)
Company 12	4.7	0	0.1	6	0.4	8	0.5	12	0.7
Company 13	3.9	(18)	(0.8)	(10)	(0.4)	(8)	(0.3)	(2)	(0.1)
Company 14	3.8	(30)	(1.4)	(24)	(0.9)	(23)	(0.8)	(27)	(0.9)
Company 15	3.1	6	0.0	2	(0.3)	2	(0.3)	7	(0.1)
Company 16	2.6	9	0.6	1	0.4	0	0.3	1	0.2
Company 17	2.2	1	0.9	(5)	0.5	(6)	0.4	(7)	(0.2)
Company 18	1.4	7	(0.1)	20	0.6	24	0.7	22	0.6
Company 19	0.1	5	0.0	(2)	0.0	(4)	(0.0)	(9)	(0.1)
% winners		*32*		*58*		*53*		*47*	
median performance of winners		*5*		*1*		*2*		*7*	
median performance of losers		*(14)*		*(10)*		*(8)*		*(9)*	
capital deployed in winners		*25*		*49*		*49*		*50*	
capital deployed in losers		*75*		*50*		*50*		*49*	

*Alpha is expressed on a 100% basis when the capital deployed is <95%

Research activity — 15 Nov 2015 to 15 Nov 2016

	Stock Idea	Research P1	Research P2	Research P3	PGM	Paper portfolio	Status Date
Current							
Company 1	○	○					25 Feb 16
Company 2	○	○					2 Feb 16
Company 3	○	●					29 Jun 16
Company 4	○	○					16 Feb 16
Company 5	○	●					22 Jul 16
Company 6	●	●					4 Aug 16
Completed: Holding (subsequent)							
Company 7	○	○	○	○			1 Feb 16
Company 8	○	○	○	●			5 May 16
Company 9	●		●	●			
Completed: Holding (existing)							
Company 10	●		●	●			

		2013	2014	2015
A.N. Analyst Japan Paper Portfolio	Contribution vs ARL Benchmark	(1)	(1)	23
	Alpha vs Analyst's benchmark	(6)	(3)	31
Started 25 July 2013	*Capital deployed*	*11*	*40*	*74*

Alpha = total contribution of names relative to respective measure/capital deployed *100

Summary of research activity

Summary of Policy Group Meeting votes

Summary measures from previous annual scorecards

Vote Summary	# of votes	# of votes for which stocks were: Winners (outperform B'mark)	# of votes for which stocks were: Losers (underperform B'mark)	Median % performance v B'mark of: Winners	Losers	All
Buy / Add / Retain	78	**50**	50	11	(7)	0
Not a Buy / Sell	52	77	**23**	12	(7)	9
Total	130	61	39	12	(7)	5

APPENDIX 2: DECISION ANALYTICS CASE STUDIES

Case Study 1: Loss aversion and sunk cost fallacy

An analyst tended to hold on to losing stocks much longer than winning stocks. Through analysis and discussions with the analyst, the team identified two underlying behaviours. First, the analyst sought to avoid the pain of realising losses in their paper portfolio, and second, the analyst expressed a reluctance to discard their expertise in a given company, which led them to hold on to these names even as their future outlook worsened. These behaviours are examples of loss aversion and sunk cost fallacy (and potentially some endowment bias) and were potentially influencing factors in the analyst's decisions to hold on to losing stocks.

To help this analyst, the Decision Analytics Team set up a "nudge" email for them. When a stock hits a 25% loss threshold, the analyst receives an automated email which reminds them of the patterns previously observed in their data, prompts them to review their thesis, and poses thought exercises for them to work through, such as, "If you did not own this stock, would you buy it today?" Such exercises are designed to help refocus the analyst on the opportunity ahead instead of costs incurred in the past. The nudge also reminds the analyst that they can speak to the Decision Analytics Team to talk through behaviours or provide further analysis.

Case Study 2: The Endowment effect and holding winners past their prime

An analyst tended to hold on to older winners beyond their peak alpha-generative phase, particularly after their valuations had become comparatively high[3]. On consultation, the analyst shared that they were consciously holding on to their winners to offset the disposition effect. The disposition effect is a tendency to sell winners too early, and hold losers too long, because of loss aversion. The pattern the Decision Analytics Team observed indicated that the analyst may have been overcompensating for the disposition effect and selling winners too late instead.

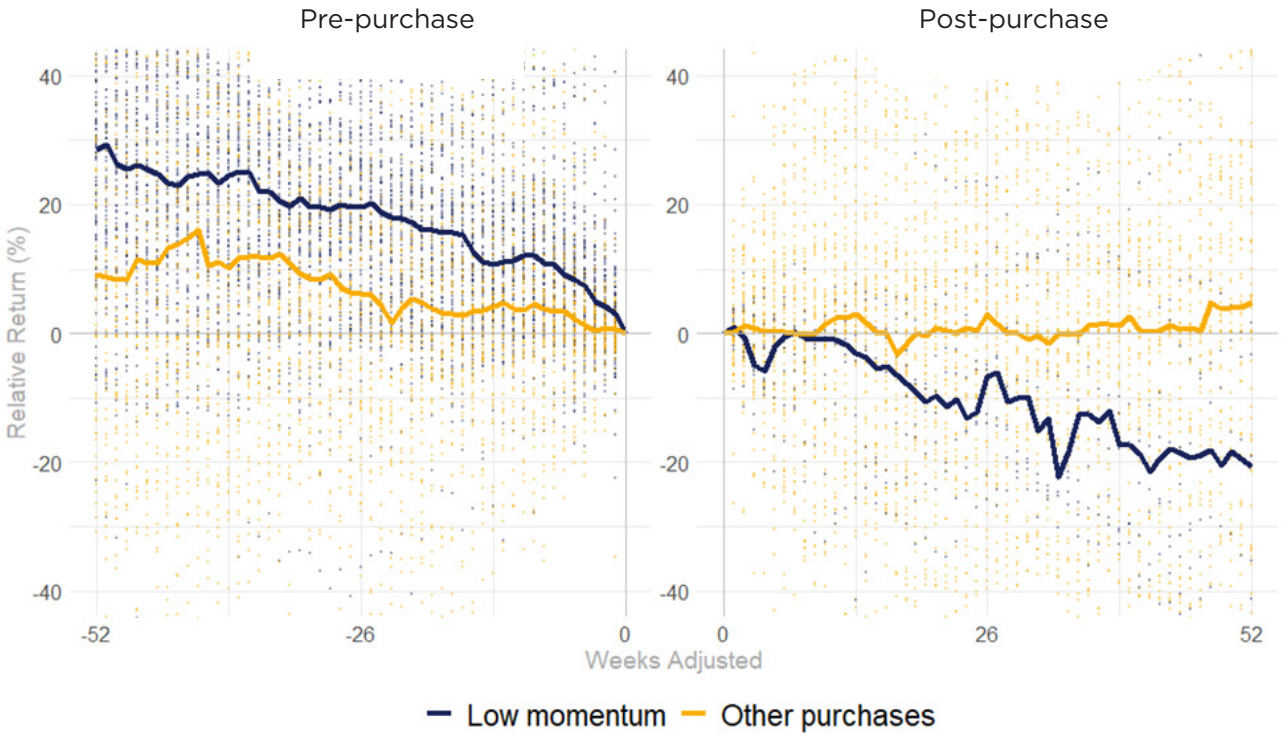
To help the analyst, the Decision Analytics Team set up a nudge email for them, which they receive when any of their holdings become older winners with high valuations. This email encourages the analyst to complete sell checklists or review their investment thesis, which they can perform with the help of Orbis' proprietary Thesis Tool. This tool enables analysts to keep track of how their original investment case is playing out. When new information about a stock arises, the analyst can document its impact on key thesis drivers and communicate this to Portfolio Managers and team members when needed.

Case Study 3: The bargain hunter tempted by low momentum

The Decision Analytics Team identified that an analyst was three times as likely to buy early than buy late. They had a bias toward deep value stocks with low short-term momentum. For this analyst, on average, these stocks continued to fall in price in the months after they first bought them.

In the illustrative charts below, the lines show the average relative return of holdings in the year before and after initial purchase of each position. For this analyst, the 10 poorest performing stocks in the year prior to purchase ("low momentum", blue line), typically underperformed by ~20% in the first year of the holding. All other purchases ("other purchases", yellow line) had a lower exposure to low momentum and performed inline with the benchmark in the year after purchase.

AVERAGE RELATIVE RETURN OF HOLDINGS IN THE YEAR PRE- AND POST-PURCHASE



The analyst acknowledged that for such deep value stocks, which appeared attractive on a long-term view, they would often give comparatively less consideration to the catalyst for a short-term turnaround.

To help this analyst, the Decision Analytics Team connected them with another member of the investment team who had shown repeated skill in identifying short-term catalysts—something uncovered in their own Decision Analytics exploration report. The analyst also added extra criteria to their purchase checklist to focus on short-term catalysts. Furthermore, the Decision Analytics Team set up a nudge email to remind them of this tendency—and to prompt them to look for turnaround catalysts—whenever they start researching low momentum stocks in the future.