Factors, funds and performance chasing

Innova Asset Management

Alpha is a term which is bandied around a lot in our industry. We all want to deliver alpha to clients, find investments that generate alpha and naturally base the fees charged on investment products on their history of creating alpha for investors.

In its absolute simplest definition, alpha is just the return of a portfolio over its benchmark:

$$\alpha = \text{portfolio return - benchmark return}$$

However, being managers who emphasise 'factor investing', we do not consider this a true reflection of manager outperformance. We will get into why that is later, for now, let's just term the definition set out above as 'naïve alpha'.

Given that most advisers would hear the term alpha in relation to managed funds, let's focus on that particular investment product and consider the dangers of just paying attention to, or chasing naïve alpha.

Past performance is not an indicator, et cetera

It is well-known that investors tend to chase performance—despite the ubiquitous 'past performance is not an indicator of future performance' warning on all fund materials.

Human psychology tends to favour that which has been going up over that which has been losing money—this is the fundamental building block of 'momentum' strategies that aim to exploit this phenomenon. But for the behaviour to work and deliver long-term outcomes to clients, it is assumed that performance will be persistent over time—that is, managers who are delivering naïve alpha today must continue delivering that alpha tomorrow, and next year and so on.

Our research suggests that *naïve alpha is not persistent*, and in fact, may be mean-reverting. Mean reverting means that, where a variable experiences a deviation from its average, it is likely to revert back towards that average over time. In other words, rather than predominantly being positive or negative, prices or returns cycle around an average point over time. In the case of alpha, this usually means performance cycles around an average of zero—in direct contrast to the requirement that alpha is persistent (if you invest based on past performance). Our research shows that a manager's past performance has a negative relationship to their future performance when measured across a wide universe and multiple asset classes.

Other historical research comes up with similar findings, and we recommend a read of ASIC Report 22, *A review of the research on the past performance of managed funds*, 2003, which explores other literature on the persistence of fund performance.

Mean reverting managers

In the decade-plus that the Innova portfolios have been running, we have observed that the 'alpha' that managers report tends to fluctuate—it is not uncommon to see a manager have a few fantastic years,

Table 1. Effect of momentum and valuation: Australian equity managers

Sample one										
Fund	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Momentum	14.8%	(9.5%)	(5.7%)	7.2%	18.0%	47.2%	25.7%	44.6%	18.9%	27.2%
Valuation	(15.4%)	(6.7%)	(22.0%)	(28.2%)	(25.8%)	(5.1%)	(5.1%)	(7.5%)	(22.7%)	(19.1%)
Efficacy	7.6%	2.0%	20.9%	18.5%	10.0%	15.6%	8.0%	18.8%	31.4%	9.8%

Sample two										
Fund	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Momentum	5.2%	(21.5%)	23.4%	34.6%	8.5%	23.6%	40.8%	(4.2%)	13.6%	(31.7%)
Valuation	(27.2%)	(19.1%)	(9.5%)	(8.7%)	(32.2%)	(9.8%)	(8.3%)	(24.9%)	(24.9%)	(10.6%)
Efficacy	24.6%	13.3%	7.4%	11.4%	17.0%	7.4%	16.5%	12.0%	15.5%	14.8%

Source: Innova Asset Management

followed by an equally lengthy period of underperformance relative to their benchmarks.

Rather than just acknowledging that we have observed this 'alpha mean-reversion', we can demonstrate statistically that this exists, and our research encompasses various methodologies that illustrate this effect. However, in this article we will look at the straightforward relationship between past performance and future performance.

Given their relative weight and emphasis in client portfolios, we will focus on Australian equities and Australian fixed income for this discussion.

Let's start with some simple proxies for 'momentum' and 'valuation', concepts established in *Value and Momentum Everywhere*, by Asness, Moskowitz, & Pedersen, 2013:

- 1-year past performance is a good proxy for the momentum of an asset—the higher the past performance, the higher the expected momentum would be.
- 5-year past performance is a good proxy for the valuation of an asset—if it has been performing highly for years, you would imagine it is getting expensive, therefore its valuation will be high.

But these proxies were built for valuing individual assets, what does this have to do with managed funds?

You can use these proxies for valuation and momentum to form a forecast for the next 1-year of returns—or in our case, the level of alpha—and then test this model throughout the life of a fund:

- If momentum has a positive influence on the future alpha, then we can say that naïve alpha has some short-term momentum drivers (that is, funds that have performed well/poorly over the past 12 months continue to perform well/poorly over the subsequent 12 months).
- If valuation has a negative influence on the next year of alpha, we can say long-term performance is mean-reverting (that is, funds that have performed well over the last 5 years are likely to start to underperform in subsequent years).

Let's examine some findings.

Australian equities

For Australian equities, Table 1 shows two samples of managers (anonymised) and the effect momentum and valuation have on their next 1-year alpha. We then consider the average of these effects across the entire universe.

Here, naïve alpha = return over the ASX 200.

For clarity, the percentages for momentum and valuation are known as 'coefficients', which represent the relationship those two factors have to next year's performance. For example, if the valuation reads -30%, the model is saying that each 1% of valuation will represent a drag of -0.30% on next year's performance.

Note that we include 'efficacy' here, known in statistics as R-squared. Efficacy represents the amount of variance of the next 1-year of returns that is explained by momentum and valuation alone in a model. Generally in forecasting models, a number above ~7-10% is a strong relationship, particularly given that we are only using different windows of past performance as predictors.

Let's look at these samples graphically:

As can be seen in Figure 1 on the next page, all the funds in this sample have a negative relationship to valuation, and most have a positive relationship to momentum.

If we average these findings out across the 100+ Australian equity managers who fell within our testing universe, we get the following results shown in Table 2.

Table 2. Summary of results

Full sample	Average
Momentum	16%
Valuation	(21.8%)
Efficacy	16.8%

Source: Innova Asset Management

The strong negative relationship that valuation has on future alpha is empirical proof that naïve alpha is mean-reverting over the medium term. Let's look at how these figures stack up for another asset class.

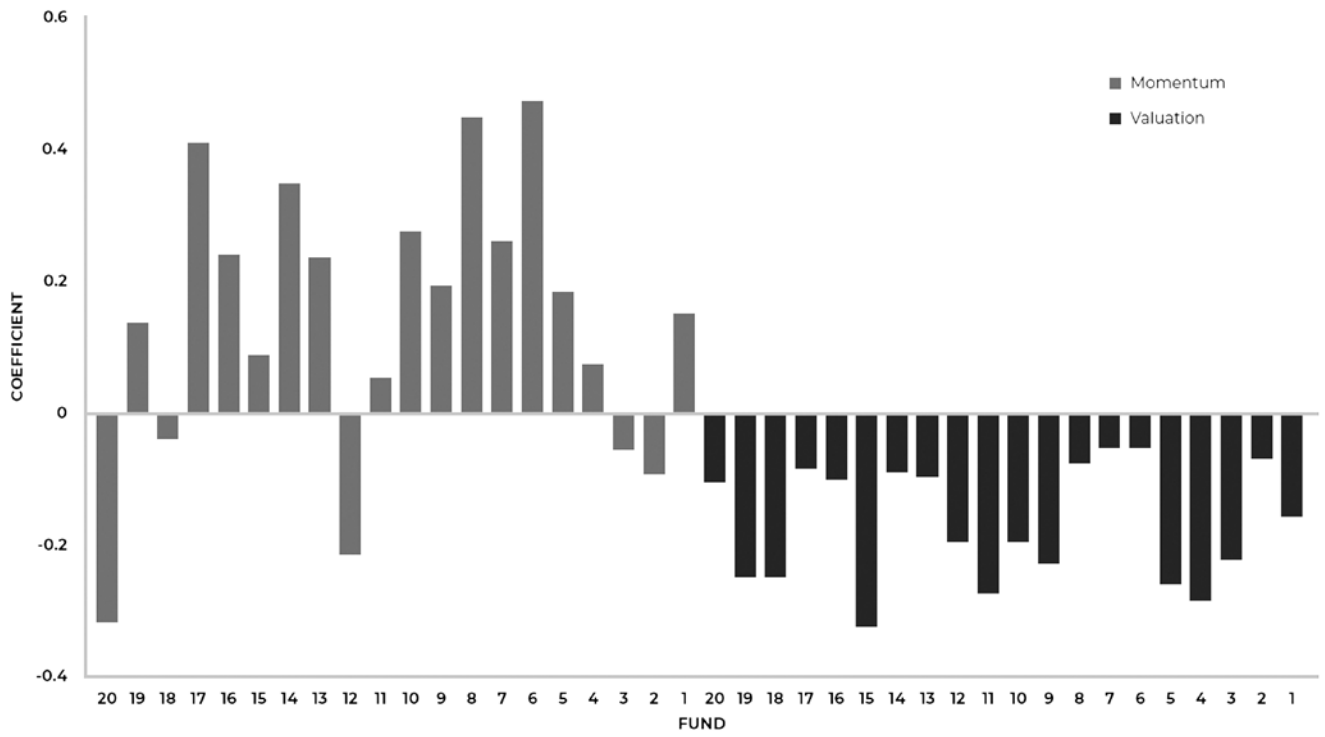
Australian fixed income

We take the same approach for Australian fixed income, except the naïve alpha calculation is performance over the AusBond Composite 0+Yr Index.

Table 3 shows a very similar dynamic for Australian fixed income managers as that which we saw for equities managers. Let's see how this looks graphically:

As seen in Figure 2 on page 4, there is a slightly less consistent

Figure 1. Coefficients: 12-month forward returns, Australian equities managers



Source: Morningstar, Innova Asset Management

Table 3. Effect of momentum and valuation, Australian fixed income managers

Sample one									
Fund	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Momentum	5.8%	5.5%	(17.9%)	(14.9%)	14.0%	78.7%	24.5%	(0.2%)	5.2%
Valuation	(47.2%)	(51.4%)	(8.1%)	(19.1%)	(7.1%)	9.6%	(25.3%)	(3.6%)	(28.2%)
Efficacy	22.4%	36.6%	8.3%	9.8%	3.2%	65.9%	12.9%	0.6%	16.7%

Sample two									
Fund	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
Momentum	13.9%	39.1%	(33.5%)	25.6%	0.7%	46.0%	44.6%	(1.9%)	(4.2%)
Valuation	(13.5%)	(49.2%)	(5.6%)	(21.4%)	(23.4%)	(11.1%)	(52.1%)	(19.7%)	0.9%
Efficacy	5.9%	24.3%	12.4%	15.4%	12.4%	20.7%	19.0%	6.2%	0.2%

Source: Innova Asset Management

profile for Australian fixed income managers than for Australian Equities, but the averages work out to show similar relationships, refer to Table 4.

Table 4. Summary of results

Full sample	Average
Momentum	9.7%
Valuation	(16.8%)
Efficacy	14.4%

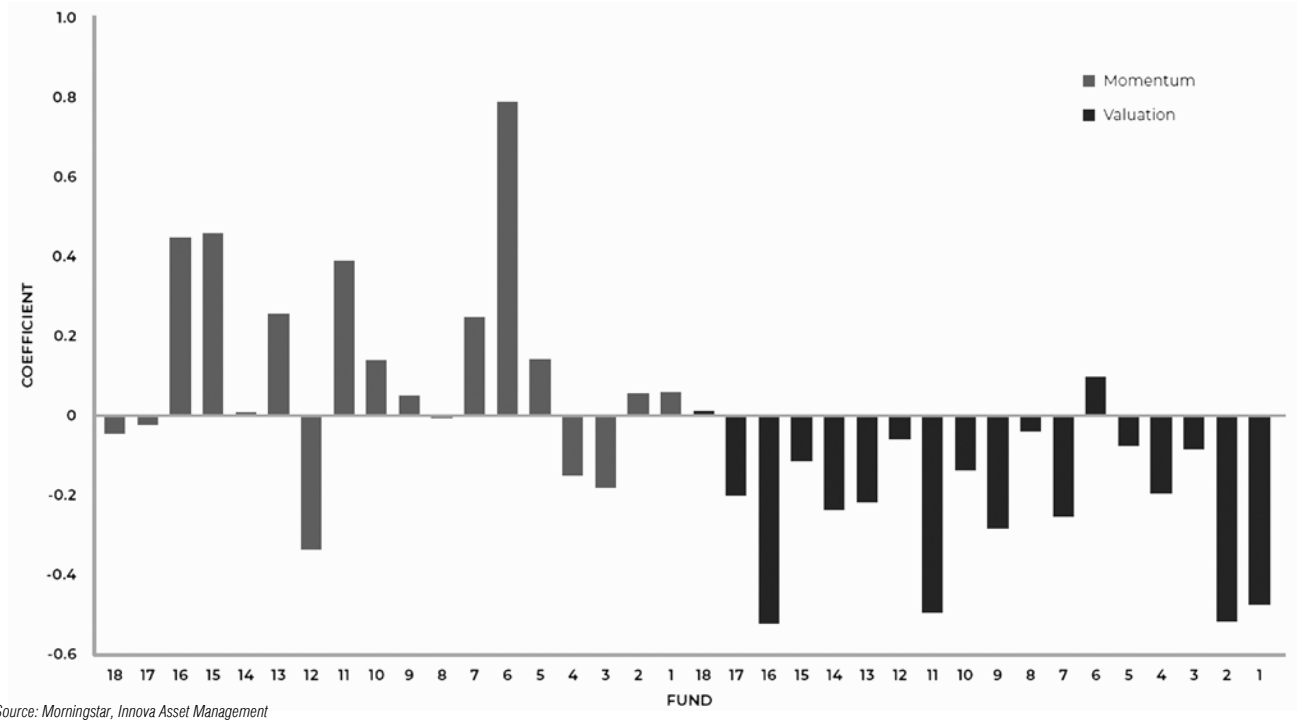
Source: Innova Asset Management

What does this mean?

Intuitively, it does not make sense for manager outperformance to mean-revert over time—why would the skill and experience of an investment team fluctuate, rather than remaining steady or improving as they spend more time developing their strategy? If they have done well over the past five years, logic suggests this is because of the manager's skill and they should continue to deliver outperformance.

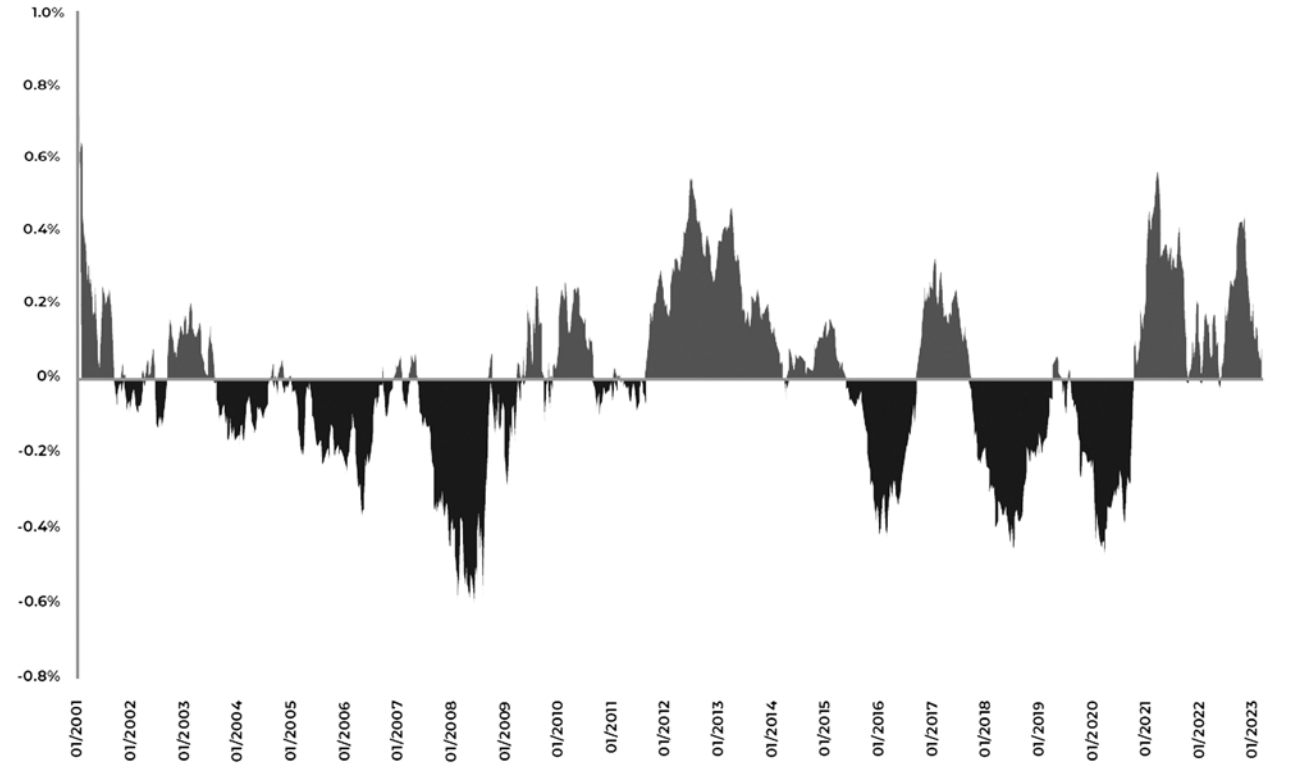
Our data suggests that this behaviour is not due to the management of the fund so much as the 'investment style', or, more precisely, market factors.

Figure 2. Coefficients: 12-month forward returns, Australian fixed income managers



Source: Morningstar, Innova Asset Management

Figure 3. 12-month rolling factor premia: Australian value



Source: Morningstar, Innova Asset Management

The quote

In its absolute simplest definition, alpha is just the return of a portfolio over its benchmark

Most readers would be familiar with styles/factors such as value and growth in equities, but other factors that should be considered include size, quality and momentum.

Unlike intangible concepts such as level of investor skill, factors do indeed cycle—and this can be charted as shown in Figure 3 on the previous page.

Figure 3 shows that the value factor in Australian markets tends to cycle, with the peak to trough often taking at least two years—something which lines up with momentum being positive over 12 months (the factor is moving in one direction), and valuation being negative (the factor is cycling back, which generally takes a few years to come into effect).

Factor-adjusted alpha versus naïve alpha

This can be shown mathematically by measuring 'factor-adjusted alpha' rather than naïve alpha. Factor-adjusted alpha measures the performance achieved not only above or below a benchmark, but also after factoring in the manager's style—or the factor(s) the manager is exploiting. Let's take two new samples from Australian equities to illustrate this. If we build the same forecast model for factor-adjusted alpha, using only past returns, the results for the two sample groups of managers are shown in Table 5.

Table 5. Factor-adjusted alpha

Model Efficacy	Naïve Alpha	Factor-Adjusted Alpha
Sample 1	7.01%	1.47%
Sample 2	10.76%	3.19%

Source: Innova Asset Management

Factor-adjusted alpha takes the performance of the manager over a certain factor, plus the market, to penalise any out/underperformance based on the driving market factor behind the returns.

The dramatic reduction in model efficacy when we switch from naïve alpha to factor-adjusted alpha, shows that it is the market factors influencing manager returns that have the highest mean-reverting qualities, as opposed to looking at the manager's 'skill' in isolation. In other words, most of the 'skill' that leads to naïve alpha can be explained by the factors it is exposed to. At the outset, we stated that naïve alpha is not an accurate reflection of a manager's true performance—this is why.

Don't be naïve about alpha

If there is a key takeaway from these findings, it is that you should not take a naïve view of the alpha that a manager is generating. An investment team is being paid fees to create genuine value for clients—that value should take into account the market forces that are helping or hindering them, and this should form part of your own consideration. Market factors play an integral part in manager performance—and should be considered in the assessment of those managers by astute investors looking to build a robust, long-term portfolio.

Likewise, be wary about chasing alpha if only viewed at a naïve alpha level. This is unlikely to lead to superior outcomes, and may in fact deliver poorer results within a few short years due to the mean-reverting nature of the factors.

In short, be mindful of paying active-management fees if a strategy's alpha can simply be attributed to a style bias—you may be able to access this same factor at a lower price. Equally, note whether the style has performed well or poorly over the last few years—the mean-reverting nature of the factor-adjusted alpha makes it likely that an allocation to an exposure that has performed well in recent years will cycle back to underperforming over the medium term. **FS**