portfolio construction forum

Four stages of investment analysis

Michael Furey | Delta Research & Advisory | 11 August 2017

In May, the Chief Investment Officer of the Future Fund, Raphael Arndt, spoke about how they are refining their approach to their listed equities investment program. The primary concern was whether "they are paying for (active) managers stock picking skill". His view was "if we want factor exposures, we can access factor indices much more cheaply without paying active management fees". The primary catalyst to this thinking is that the Future Fund faces similar issues to all investors. That is, considering the long-run outlook for investment returns being nothing more than single digits, fees are a very high proportion of the total portfolio's expected return - so any reduction in fees from increased efficiency will have significant impact on final returns.

As a result, the Future Fund redefined the objectives of its $38 billion of listed equities into four categories that can be summarised as:

1. Capturing **equity market risk**;
2. Harvesting long-term **equity factor premia**;
3. Delivering uncorrelated, good, **skill-based returns**;
4. Accessing desired exposures with a **whole of fund perspective**.

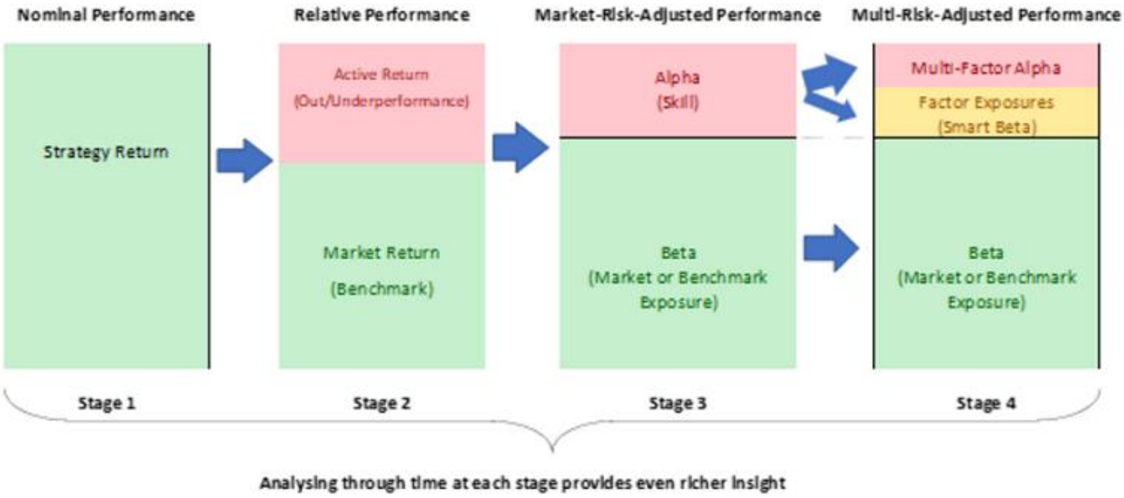
I'm sure you've judged by the title that this article is not about explaining the direction of the Future Fund. Rather, the objective here is to communicate the benefits of a deeper level of investment analysis than I believe is currently performed across our industry. The reason why I mention the Future Fund's approach to their listed equities program is that they are the most recent and perhaps most prominent example of the application of what I call the "fourth stage" of investment analysis. That said, there is nothing new in the application of the fourth stage - however, with improving technology, analytical tools, access to a greater depth of breadth of investment strategy, and a move by practitioners towards investing via managed accounts, it is probably time for advised portfolios to take the same step.

Successful application of the fourth stage of investment analysis is likely to result in investment portfolios that have a stronger reflection of investment philosophy (or beliefs), a more efficient investment allocation, and increased performance risk management.

So what are the Four Stages?

They are best explained using a graphic such as Figure 1.

Figure 1: Four stages of investment analysis



Stage 1 is pure performance analysis – this is what most clients are focused solely on, being the overall return result and, perhaps, volatility. But while performance is typically a primary target, performance numbers alone (or over time) provide little insight as to whether an investment is truly good or bad. Looking only at performance often leads to bad investment behaviours, such as selling low and buying high.

Stage 2 is the assessment of the quality of an investment by comparing it to a benchmark. I would argue that most of the investment advisory community are at this stage. Often, the result is a conclusion that outperformance is good and underperformance is bad. The choice of the benchmark is a critical part of this analysis – and where most mistakes are made at Stage 2. Sometimes, the benchmark is a peer group, which may be fine depending on the investment type. However, best practice suggests a benchmark should be liquid representation of the underlying investment universe, typically a market-cap weighting of available investments. Common benchmarks include the S&P/ASX 200 for Australian equities or MSCI World for global equities.

However, if we believe that achieving higher returns requires accepting higher risk, then outperformance alone may be a dangerous way of assessing whether an investment is good or bad. Strategies may have benchmark outperformance over long periods of time, not because they are necessarily skilful, but rather because they may be taking on a lot of risk. A simple strategy example is a geared Australian Shares index fund. With the Australian sharemarket producing a performance of nearly 11% per annum over the last five years, an initial loan to value ratio of 50% and borrowing costs at a very high and fixed 5% per annum would have produced returns for the fund in the vicinity of 15% per annum. This outperformance has nothing to do with being skilful or good. It's simply the result of accepting much greater risk than the market.

Stage 3 adjusts for market risk and divides the portfolio's risk into the two components we hear so much about – alpha and beta.

Alpha is the market risk-adjusted outperformance often associated with measures of active management skill. Beta represents a strategy's exposure to the market. For the above-mentioned Geared Australian Equities Index example, alpha should be slightly negative and close to the cost of the fund, while beta (thanks to a loan to value ratio of 50%), should be up to 2 – that is, twice the market exposure (or risk). While the geared index strategy has strong outperformance, it's negative alpha suggests there is no skill behind it, because the return has been driven by having double the market exposure.

Understanding an investment's beta – exposure to the market – is an essential part of portfolio construction because this is the measure that helps portfolio constructors determine the asset allocation role of a strategy. If we want to choose an investment that is fully representative of the market, then its beta should be around 1. If the strategy's beta is less than 1 then that strategy may be holding significant amount of cash, so it potentially compromises the desired asset allocation and reduces the portfolio's goal of capturing the equity risk premium. A fund with an expected beta of less than 1 will underperform its benchmark in a strong bull market, unless there is significant skill (or alpha) and, of course, that is far from a guarantee. However, that skill may also be due to luck – or perhaps styles or factor exposures that happen to be in favour over a period of time. This is where Stage 4 Investment Analysis may be required.

Stage 4 investment analysis is where the Future Fund is at, along with many other institutions and sophisticated investment professionals.

Stage 4 further adjusts for non-market systematic risks which are typically represented by smart beta exposures that can purchased somewhat cheaply. In plain English, typical smart betas exposures may include style indexes such as Value (e.g. low PE ratio), Size (e.g. small cap), Momentum (e.g. last year's best performers), Quality (E.g. high profitability and low debt), and others.

With the growth of the Exchange Traded Fund (ETF) market into these smart beta exposures, purchasing the preferred style of investing is getting easier.

And, as Raphael Arndt of the Future Fund alluded to, purchasing factor exposures is cheaper than purchasing pure active management and may sometimes present a more efficient way of gaining desired exposures to reflect your investment philosophy around what works in markets.

Stage 4 investment analysis explains which factor exposures (or smart betas) are driving portfolio outcomes, as well as the exposures to each. This means that the Multi-Factor Alpha (refer Figure 1, stage 4) is the pure alpha (or skill) a manager brings to a strategy and is the result of their success in security selection, market timing or, potentially, smart beta timing.

Positive Multi-Factor Alpha is the holy grail of active management and when you consider the cheaper access of market-cap-weighted index funds, and smart beta funds, positive Multi-Factor Alpha is what investors should be paying the higher fees for.

Overall, the Stage 4 investment analysis framework increases the chances of the portfolio constructor to choose investments that:

- reflect his/her investment philosophy with demonstrated characteristics around desired styles that are expected to outperform (smart betas/factors);
- reflect the desired asset allocation with demonstrated market exposure that is likely to continue (market beta);
- are managed by active managers with demonstrated potential skill from positive risk-adjusted outperformance (Multi-Factor Alpha); and,
- are "true to label". That is, the chosen strategy's market beta and smart beta exposures are consistent with the investment process communicated by the manager.

While this is not the end of the portfolio construction or strategy selection process or story, implementing a Stage 4 investment analysis framework is a strong move towards a deeper understanding of portfolio risk drivers.

This in turn means potentially greater efficiency as risks can then be accepted, mitigated or even removed. It changes the manager selection or retention approach from return driven to risk driven. This enables the role of each investment strategy to be defined more specifically. When executed correctly, portfolios may have lower strategy turnover, therefore reduced investment costs and better returns.

Perhaps the next steps include answering the questions:
- what risks do I believe add value?
- how do I capture them?
- how do I remove the ones I don't believe in?

And this potentially brings us into the world of factor investing.

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