Willis Towers Watson

Don’t end up like an index

Managing redundancy in an efficient multi-manager portfolio

John Templeton once said, “If you want to have a better performance than the crowd, you must do things differently from the crowd.” This speaks to the essence of active investing. To beat the market, investors need to take positions that are different from the benchmark weights; active share is defined as the percentage of a portfolio that differs from a benchmark.

Asset owners often combine multiple managers together to construct a diversified equity portfolio, in order to mitigate single manager risks. Such practice is necessary from a risk perspective, but also leads to a paradox. That is, active positions taken by different managers could offset one another to various degrees, such that the end portfolio looks more like the benchmark. In other words, the end portfolio’s active share could be diluted to a much lower level than the weighted sum of the underlying managers’ active shares.

In a multi-manager portfolio, redundancy can be calculated from active share – it is the percentage difference between the active share of the underlying managers (assuming no overlap) and the active money of the actual end portfolio. In practice, combining active managers always leads to some degree of redundancy between 0 and 100%. **A low level of redundancy is preferable**.

A redundancy of 100% implies that all active positions taken by underlying manages are offsetting, which means investors are getting the benchmark portfolio but still paying active fees for it. This is obviously a failure of portfolio construction and should be avoided.

A redundancy of zero is seemingly appealing, as it indicates no offsetting relative positions when the managers are combined. However, it is rare in practice, and actually indicates the managers are holding the same directional weights in the same stocks and/or holding stocks outside the benchmark. The former is largely a duplication, which defeats the purpose of diversification in portfolio construction, and thus is also undesirable.

Obviously, redundancy is only one facet in portfolio construction, and should be at least considered alongside with “commonality” (i.e. overlap of underlying managers’ holdings). In our view, **an efficient equity portfolio should offer sufficient diversity of manager exposures (i.e. low commonality) while keeping redundancy low.**

Redundancy is a useful metric to assess such dilution.

How is redundancy calculated?

- Redundancy is calculated by the following relationship

$$\textit{Redundancy (\%)} = \frac{\Sigma\ \textit{gross active positions} - \Sigma\ \textit{net active positions}}{\Sigma\ \textit{gross active positions}}$$

- ‘Gross active’ is a weighted sum of the absolute active positions in a stock

Stock	Manager 1 (50%)	Manager 2 (50%)	BHP’s Gross Active Position
BHP	-2%	+5%	[-2% x 50%] + [5% x 50%] = **3.5%**

- ‘Net active’ is a weighted sum of the active positions in a stock

Stock	Manager 1 (50%)	Manager 2 (50%)	BHP’s Net Active Position
BHP	-2%	+5%	[-2% x 50% + 5% x 50%] = **1.5%**

A regular question we get asked is “What is the right level of redundancy?”. Unfortunately, there is no magic number for this question. A few factors would influence the achievable level of redundancy.

Breadth of the market: A broader market provides a larger opportunity set for managers to consider. As such, managers are less likely to crowd their bets on the same stocks.

Number of managers included in a portfolio: Investors would desire a sufficient number of active managers in their portfolios in order to mitigate single manager risks. However, as more managers are included in a portfolio, chances are bigger that some managers have offsetting active positions versus others, leading to higher redundancy. This paradox could be addressed by using managers of distinctive investment approaches.

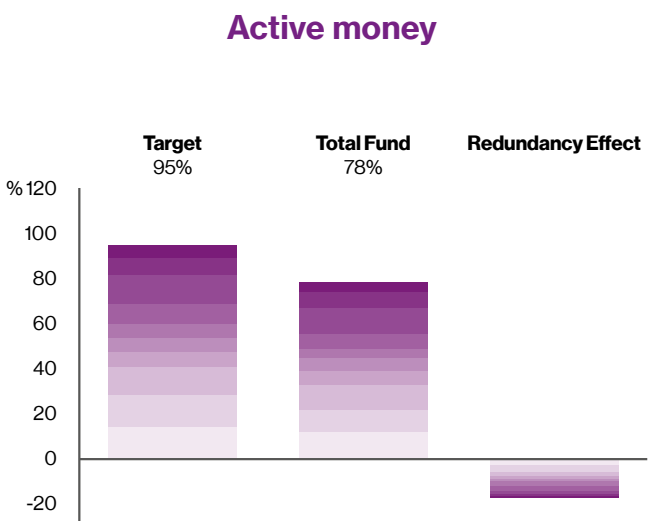
Diversity of approach of underlying managers: Managers with clearly defined and consistently implemented philosophies tend to focus on a subset of market opportunities. If investors can enlist managers with distinctive styles and focuses, the end portfolio stands a better chance of containing redundancy.

Active share of individual managers: Active managers are not expected to have views on every stock in their investible universe. Thus, an active portfolio could have many zero stock positions, which are de facto underweights against the benchmark. If a manager holds an overweight in a stock, this overweight needs to be large enough not to be meaningfully offset with zero exposures taken by other managers. This indicates that higher active shares of underlying managers would help lower the redundancy. A concentrated benchmark tends to restrict the level of active share that a manager could take. Hence, a concentrated benchmark is unconducive to having a low redundancy in a multi-manager portfolio.

Risk control positions: Many active managers maintain “risk control” positions to manage tracking errors even though they do not necessarily have high conviction in these stocks. Such positions not only restrain the active share in a manager’s portfolio, but also lead to possible dilution against underweights taken by other managers.

The above factors influence portfolio redundancy conjunctively. In practice, we often find it easier to construct an efficient portfolio in a broad market using high active-share managers of distinctive philosophies who only invest in their highest conviction stocks. Take our global equity focused portfolio for example. We use approximately 10 managers, each having an active share of at least 85% and often above 95%, across a broad spectrum of styles. By doing so, we are able to achieve less than 20% redundancy in the end portfolio, while only 10% of the underlying holdings are shared by two or more managers.

In comparison, it is much harder to achieve the same level of high diversity and low redundancy in the Australian equity market, which is much narrower and more concentrated. Not to mention many Australian managers focus their research efforts on ASX100 universe and adopt a full market coverage model, which is more likely to lead to conflicting views and offsetting positions. These structural issues could be partly mitigated by having all-cap, unconstrained managers who are able to seek opportunities across the broad market cap spectrum. By doing so, investors could potentially achieve redundancy of 30%, though it is unlikely to be as effective as we have seen in the global equity space.



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